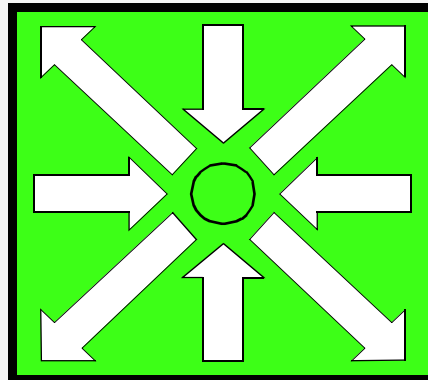


# SPECTRUM<sup>®</sup>

From a p r s m a Management Technologies

**SPECTRUM Enterprise Manager**  
**Device Management**

## Cisco MC3810 Management Module



**Supports Management Module SM-CIS1005**

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# Introduction

---

This section introduces the SPECTRUM Device Management documentation for Cisco MC3810 devices.

---

This introduction to the Device Management documentation for Cisco MC3810 devices contains the following information:

- [Purpose and Scope on Page 6](#)
- [Required Reading on Page 6](#)
- [Supported Devices on Page 7](#)
- [The SPECTRUM Model on Page 7](#)

## Purpose and Scope

Use this documentation as a guide for managing the Cisco MC3810 device with the SPECTRUM management module SM-CIS1005. The documentation describes the icons, menus, and views that enable you to remotely monitor, configure, and troubleshoot the Cisco MC3810 device through software models in your SPECTRUM database.

Only information specific to the supported management module is included in this document. For general information about device

management using SPECTRUM and for explanations of basic SPECTRUM functionality and navigation techniques, refer to the documentation listed under [Required Reading](#).

## Required Reading

To use this documentation effectively, you must be familiar with the information covered by the other SPECTRUM online documentation listed below.

- ***Getting Started with SPECTRUM for Operators***
- ***Getting Started with SPECTRUM for Administrators***
- ***How To Manage Your Network with SPECTRUM***
- ***SPECTRUM Views***
- ***SPECTRUM Menus***
- ***SPECTRUM Icons***

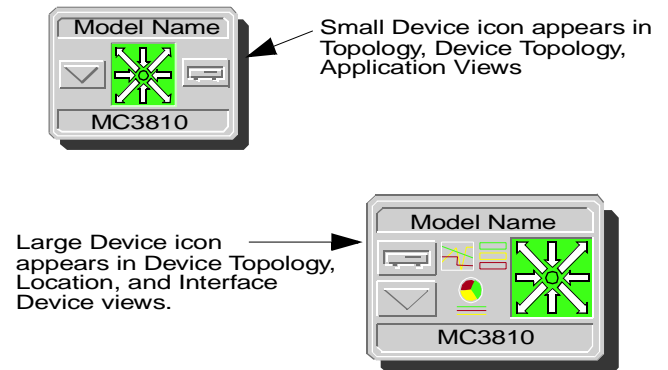
## Supported Devices

The Cisco MC3810 is a multiservice access concentrator that integrates data, voice, and video onto public or private Frame Relay, Asynchronous Transfer Mode (ATM), or leased line networks.

The Cisco MC3810 connects to any standard private branch exchange (PBX) switch, key system, or telephone, and provides up to 30 channels of voice. The MC3810 supports tie-line and ring-down modes and dual tone multifrequency (DTMF) digit-based per-call switching, using dialed digits to select destination sites and network calls. It may even eliminate the need for PBX switching at small sites when telephones and trunks are connected to the MC3810 and it is used as a voice switch.

## The SPECTRUM Model

SPECTRUM uses a single device model type, **Cisco\_MC3810**, for modeling the Cisco MC3810. MC3810 models are represented in SpectroGRAPH views by Device icons. As shown below, the Device icon varies slightly depending on the kind of view in which it appears.

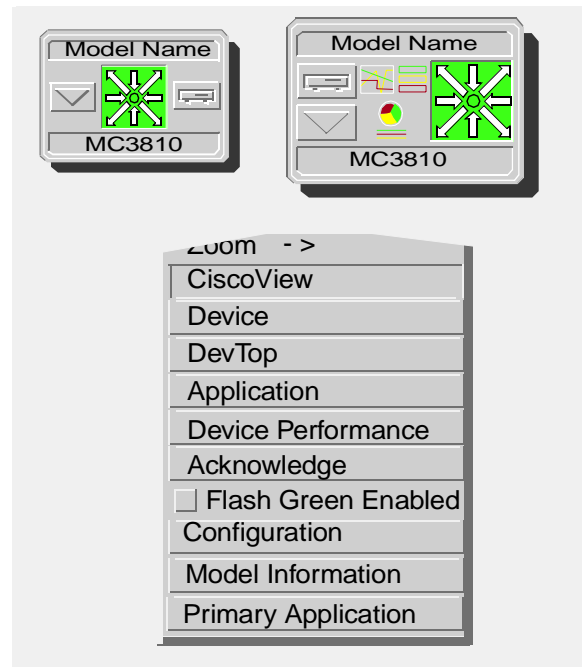


Device icons provide access to the views, subviews, and tables that let you manage the modeled device. [Figure 1](#) shows the model-specific portion of the **Icon Subviews** menu for a Cisco\_MC3810 Device icon in a Topology view. The views listed below are accessible directly from

this menu and are described individually in subsequent sections of this documentation.

- [Events on Page 9](#)
- [CiscoView on Page 10](#)
- [Device View on Page 15](#)
- [Device Topology View on Page 20](#)
- [Application View on Page 21](#)
- [Performance Views on Page 86](#)
- [Configuration View on Page 89](#)
- [Model Information View on Page 98](#)

**Figure 1: Device Icon Subviews Menu Options**





# Events

---

This section provides the range of event messages that are specific to the Cisco MC3810.

---

The Cisco MC3810 has several event and alarm messages that are specific to its devices. If these messages are not sufficient and you wish to create your own messages, or view the existing messages for the MC3810, you can do so using the ***ECEditor***.

The event messages for the MC3810, which range from **Event03250000** to **Event03250002**, can be found in the following directory:

**<install area>/SG-Support/CsEvFormat**

# CiscoView

---

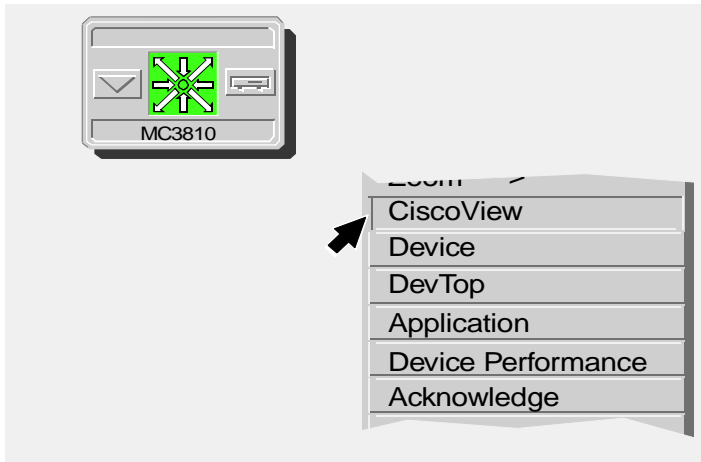
This section describes how to access Cisco's CiscoView management software from SPECTRUM.

---

CiscoView is management software specific to Cisco Routers.

The Cisco\_MC3810 model type provides a menu option from the Device icon that is used to launch CiscoView.

In order for this menu option to function you must update your **.profile** file to map this menu selection to where CiscoView is located on your system.



## For HP-UX and Solaris

Add the following information to the `/opt/SPECTRUM/spectrum60.env` file:

```
#CiscoView 3.0  
export CVIEW =<path_to_ciscoview>
```

## For Windows NT and Window 2000

From the Start>Run window, type

regedit (registry editor)

Navigate to

**HKEY\_LOCAL\_MACHINE>SOFTWARE>Aprisma  
Management Technologies> Spectrum60>  
Environment**

Choose **Edit>New>String Value**

Type CVIEW for the name, and  
<path\_to\_ciscoview> as the string value.



**Note:**

CiscoView 3.0 will appear as “Cisco View” on your device menu after the above steps have been followed. This should not be confused with “CiscoView”, which denotes the CiscoWorks 2000 CiscoView. The CiscoWorks 2000 menu picks will only appear in the device menu if the SPECTRUM Adapter script has been run. See the CiscoWorks 2000 documentation for further information.

# Tasks

---

This section identifies various management and troubleshooting tasks that can be performed for the MC3810 using the views, icons, and labels referenced in this document.

---

## Launch CiscoView

- Update .profile file ([Page 10](#))

## Monitor Performance

- Interface Device View ([Page 15](#))
- Device Performance View ([Page 86](#))
- Port Performance View ([Page 87](#))

## Set Thresholds

- Interface Thresholds ([Page 18](#))
- IPX Accounting Information ([Page 37](#))
- Model Information View ([Page 98](#))

## Create Messages

- Event Messages ([Page 9](#))

## Configure a Port

- IP Address Label ([Page 17](#))
- Interface Configuration View ([Page 18](#))
- Interface Configuration Table ([Page 90](#))
- Interface Address Translation Table View ([Page 92](#))

## View IF/Port/App Statistics

- Interface Device View ([Page 15](#))
- Interface Icons ([Page 16](#))
- Interface Status View ([Page 18](#))

## View/Change Interface IP Address

- Secondary Address Panel ([Page 19](#))

## View Current Interface/Port Status

- Interface Device View ([Page 15](#))
- Gauge Label ([Page 17](#))
- Administrative Status ([Page 18](#))

## Configure the Device

- Secondary Address Panel ([Page 19](#))
- Chassis Information View ([Page 48](#))
- Modem Application ([Page 49](#))
- Flash Application ([Page 60](#))
- Device Configuration View ([Page 89](#))
- Reconfigure Model ([Page 92](#))
- Network/Host Configuration View ([Page 96](#))

## Enable or Disable a Port

- Interface Status View ([Page 18](#))
- Admin Status ([Page 18](#))
- Peer Table - Admin Status ([Page 34](#))

## Port Route Settings

- Default Peer Serial Interface STUN Route ([Page 45](#))

## Set Connections

- BGP4 Peer Admin Status ([Page 34](#))
- Local ACK-BSTUN Connection ([Page 43](#))
- Terminal Server Line View ([Page 83](#))

## Identify Applications Supported

- Common Applications ([Page 23](#))
- Generic Routing Applications ([Page 23](#))
- Optional Applications ([Page 47](#))

## Update the Ping Request List

- Ping Request Table View ([Page 63](#))

## Set Environment Variables

- EnvMon Application ([Page 69](#))

## Enable or Disable Redundant Addresses

- Redundancy and Model Reconfiguration Options View ([Page 91](#))

## Create LANs

- Discover LANs ([Page 92](#))

## Manage the Buffers

- Buffer Management View ([Page 93](#))

# Device View

This section describes the Device view and its associated subviews for models of Cisco MC3810 devices in SPECTRUM.

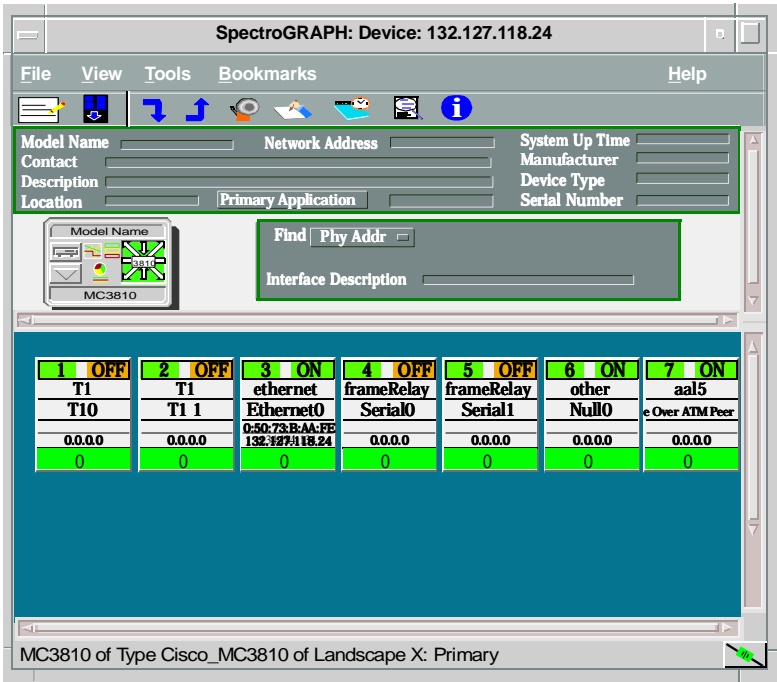
Device views use icons and labels to represent the modeled device and its components, such as modules, ports, and applications. There is one type of Device view for Cisco\_MC3810 models, the Interface Device View.

## Interface Device View

**Access:** From the **Icon Subviews** menu for the Interface icon, select **Device**.

This view provides dynamic configuration and performance information for each of the device's serial/network I/O ports, which are represented by Interface icons in the bottom panel of the view, as shown in [Figure 2](#). The middle panel of the view also displays a Device icon, which allows you to monitor the device operation and access other device-specific views.

**Figure 2: Interface Device View**



# Interface Icons

Figure 3 shows a closeup of an Interface icon from an Interface Device view. Most of the informational labels on the icon also provide double-click access to other views, as explained in the following label descriptions.

Figure 3: Interface Icon

(a)

(b)

3

ON

Ethernet

Ethernet0

0:0:30:68:6F:1B

132.127.118.24

0

a

b

c

d

e

f

g

Interface Number Label

IF Status Label

Interface Type Label

Network Type Label

Physical Address Label

IP Address Label

Gauge Label

## Interface Number Label

This label displays the interface number.

## IF Status Label

This label displays the current Operational Status of the interface (see Table 1). Note that the background color of the label also depends on the interface’s current Administrative Status, which is set by the user in the Interface Status View on Page 18. This view can be accessed by double-clicking the label.

Table 1: Interface Status Label Colors

Color	Operational Status	Administrative Status	Label Text
Green	ON	ON	ON
Blue	OFF	OFF	OFF
Yellow	OFF	ON	OFF
Red	Testing	Testing	Test

## Interface Type Label

This label identifies the type of interface — e.g., Ethernet, FDDI, Other, etc. Double-click this label to access the Interface Configuration - Information View on Page 18.



**Network Type Label**

This label identifies the type of network this interface is connected to. Double-click the label to open the Model Information view for the interface.

**Physical Address Label**

This label displays the physical address of the Cisco MC3810 interface. Double-click the label to open the Interface Address Translation table. This table cross-references device IP addresses to device MAC (Ethernet) addresses for selected nodes between networks. Double-clicking on any column entry opens an address-specific Address Translation Table Information view. This view provides the same information as the corresponding row for the IF Address Translation table, but allows you to modify field values.

**IP Address Label**

This label displays the IP address for this Interface. Double-click this label to open the Secondary Address panel. This panel provides name, network address, and subnet mask information for the interface. Any of the network information entries from this panel can be displayed on this label of the Interface icon.

**Gauge Label**

This label displays whichever performance statistic has been selected in the Gauge Control panel for this device’s interfaces (see the

**SPECTRUM Views** documentation for more information). Double-click this label to open the [Port Performance View on Page 87](#).

**Interface Icon Subviews Menu**

**Table 2** lists the Icon Subviews menu options available for the Interface icon.

**Table 2: Interface Menu Options**

Option	Opens the . . .
Performance Filter	<a href="#">Port Performance View on Page 87</a> .
Detail	Interface Detail view, which displays Packet, Error, and Discard Breakdown pie charts.
IF Status	<a href="#">Interface Status View on Page 18</a> .
IF Configuration	<a href="#">Interface Configuration - Information View on Page 18</a> .
Model Information	<a href="#">Model Information View on Page 98</a> .
IF Address Translation Table	Interface Address Translation Table view, which shows the Physical and Network address for each interface.
Secondary Address Panel	<a href="#">Secondary Address Panel View on Page 19</a> .
Thresholds	Interface Threshold view, which allows you to set the thresholds for; load, packet rate, error rate, and % discarded.

## Interface Status View

**Access:** From the **Icon Subviews** menu for the Interface icon in the Interface Device view, select **IF Status**.

This view provides information on the operational status of the interface and allows you to enable or disable the port.

### Operational Status

The current state of the interface (Up, Down, or Testing).

### Administrative Status

This button allows you to select the desired operational state of the interface (On, Off, Testing, Default).

## Interface Configuration - Information View

**Access:** From the **Icon Subviews** menu for the Interface icon in the Interface Device view, select **IF Configuration**.

This view provides the following information.

### Admin Status

The desired operational state of the interface (Up, Down, or Testing).

### Interface Index

Refers to this interface's number in sequential order of interfaces.

### Local Description

User configurable interface description.

### Physical Address

The Ethernet (MAC) address of the interface.

### Bandwidth

The estimated bandwidth of the interface, measured in bits per second. For interfaces that do not vary in bandwidth, or for which no accurate estimate can be made, a nominal bandwidth is provided.

### Queue Length

The length of the outbound packet queue, in packets.

### Packet Size

The largest packet that can be transmitted or received by the port, displayed in octets.

### Interface Type

Displays the device interface type; types are PPSerial, Ethernet, or FDDI.

### Last Change

The System UpTime value when the interface entered its current operational state.

## Change Reason

The reason for the last operational change for the interface.

## Secondary Address Panel View

**Access:** From the **Icon Subviews** menu for the Interface icon in the Interface Device view, select **Secondary Address Panel**.

This panel provides a table of IP addresses and masks obtained from the Address Translation table within the device's firmware. You can change the current address displayed in the **IP Address** field by selecting an entry from the table in this panel and clicking the **Update** button.

# Device Topology View

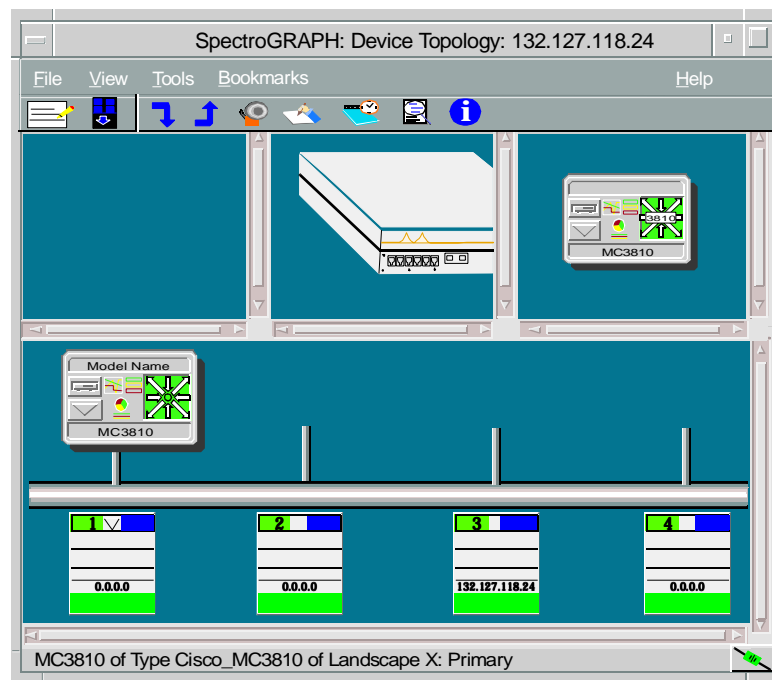
This section provides a brief description of the Device Topology view available for models of Cisco MC3810 devices in SPECTRUM.

**Access:** From the **Icon Subviews** menu for the *Cisco\_MC3810* Device icon, select **DevTop**.

The lower panel of the Interface Device Topology view ([Figure 4](#)) uses interface icons to represent the device's serial/network I/O ports. These icons provide the same information and menu options as those described in the [Interface Device View on Page 15](#). If there is a device connected to a particular interface, a device icon appears on the vertical bar above the interface icon along with an icon representing the network group that contains the device.

For further information on Device Topology views, refer to the **SPECTRUM Views** documentation.

**Figure 4: DevTop View**



# Application View

This section describes the Application view and the associated application-specific subviews available for models of Cisco MC3810 devices in SPECTRUM.

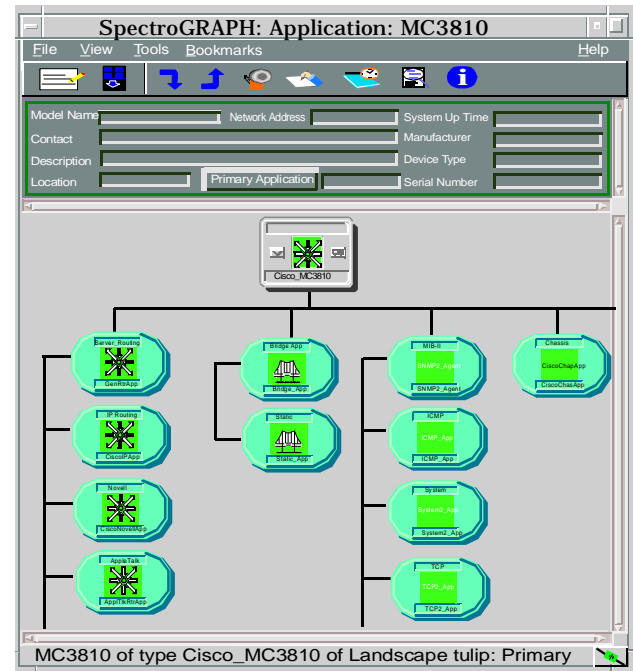
**Access:** From the **Icon Subviews** menu for the *Cisco\_MC3810 Device* icon, select **Application**.

When a device model is created, SPECTRUM automatically creates models for each of the major and minor applications supported by the device. The Application view identifies all of these application models, shows their current condition status, and provides access to application-specific subviews.

**Figure 5** shows an Application view in its default mode (Icon) where each of the application models is represented by an Application icon (see **Figure 6** for a closeup.) The Application icons are arranged hierarchically under a Device icon, with major applications in the top row and their respective minor applications stacked directly below.

If you prefer to see applications displayed by name only, in a single vertical list, select **View > Mode > List**.

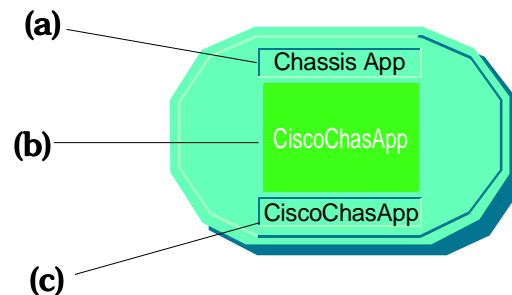
**Figure 5: Cisco\_MC3810 Application View**



# Application Icons

When the Application view is in Icon mode, each of the application models is represented by an Application icon ([Figure 6](#)). Double-clicking the Model Name label (a) at the top of the icon opens the associated Model Information view - see [Model Information View on Page 98](#). For some applications, the Model Type label (c) at the bottom of the icon is also a double-click zone, which opens an application-specific view. Any views accessible through these double-click zones are also accessible from the Application icon's **Icon Subviews** menu.

**Figure 6: Application Icon**



- a** Model Name Label/Model Information View
- b** Condition Status Label
- c** Model type Label/Application-Specific View

## Supported Applications

The MC3810 devices support both common applications (those supported by all or most devices) and device-specific applications. [Table 3](#) lists the applications that are commonly available for many or all devices managed by SPECTRUM. Because they are common throughout device management within SPECTRUM, they are described in the documentation listed within the table.

**Table 3: Common Applications Supported**

Application	For more info, see...
Routing (GenRtrApp) (includes IP Routing)	<b><i>Miscellaneous Applications</i></b>
Ethernet (EthernetApp)	<b><i>Miscellaneous Applications</i></b>
Bridging (GenBridgingApp) (includes Static Bridging, Spanning Tree, Transparent)	<b><i>Bridging Applications</i></b>
MIB-II (SNMP2_Agent) (includes ICMP, System2, TCP2, and UDP2 Applications)	<b><i>MIB-II Applications</i></b>

The views and subviews available for Cisco MC3810 device-specific applications are described in the rest of this section, grouped by major application as listed below:

- [Generic Routing Applications on Page 23](#)
- [Cisco Chassis Application on Page 47](#)
- [Cisco Modem Application on Page 49](#)
- [Cisco Flash Application on Page 59](#)
- [Cisco Ping Application on Page 63](#)
- [Cisco Queue Application on Page 65](#)
- [ATM Client Application on Page 67](#)
- [EnvMon Application on Page 69](#)
- [FDDI Application on Page 71](#)
- [Discovery Application on Page 73](#)
- [Cisco DS1APP1406 Application on Page 74](#)
- [Cisco RFC1317 Application on Page 80](#)
- [Cisco Terminal Server Application on Page 82](#)

## Generic Routing Applications

This major application has one menu option that provides access to the following view:

## Routing Protocol Comparison View

This view displays pie charts that present the following performance statistics for each routing application.

- Frames Forwarded
- Frames Delivered
- Frames Transmitted
- Errors
- Discards

The following Generic Routing major applications are available.

- [AppleTalk Routing Application on Page 24](#)
- [IP Routing Application on Page 33](#)
- [BGP4 Application on Page 34](#)
- [Novell Routing Application on Page 37](#)
- [Vines Routing Application on Page 39](#)
- [XNS Routing Application on Page 42](#)
- [Cisco BSTUN Application on Page 42](#)
- [Cisco STUN Application on Page 44](#)

## AppleTalk Routing Application

This major application (model type ApplTlkRtrApp) provides the following application-specific subviews. The **Detail** option provides access to pie charts that display standard Packet Breakdown, Error Breakdown, and Discard Breakdown information.

- [RTMP Table View on Page 24](#)
- [Kinetics Internet Protocol Table View on Page 25](#)
- [Name Binding Protocol Table View on Page 26](#)
- [ZIP Table View on Page 27](#)
- [LocalTalk Interface Table View on Page 27](#)
- [ATPORT Table View on Page 28](#)
- [ARP Table View on Page 29](#)
- [AppleTalk Echo View on Page 30](#)

### RTMP Table View

**Access:** From the **Icon Subviews** menu for the ApplTlkRtrApp Application icon, select **RTMP Table**.

This view displays the following information for the Routing Table Management Protocol.

#### RTMP Hops

The number of hops required to reach the destination network for this entry.



**RTMP Next Hop**

The IP address of the next hop in the route to this entry's destination network.

**RTMP Type**

The type of this network entry.

**RTMP State**

The state of this network entry.

**Start Net.Node**

The first AppleTalk network address in the range for this routing entry. This address is a two-octet DDP network address in network byte order.

**END Net.Node**

The last AppleTalk network address in the range for this routing entry. This address is a two-octet DDP network address in network byte order.

**RTMP Port**

The network address configured for this port.

**Kinetics Internet Protocol Table View**

**Access:** From the **Icon Subviews** menu for the *AppITkRtrApp* Application icon, select **KIP Table**.

This view displays the following information for the Kinetics Internet Protocol.

**Kip Broadcast Add**

The form of the IP address used to broadcast on this network.

**Kip Next Hop**

The IP address of the next hop in the route to this entry's destination network.

**Kip Type**

The type of this network entry.

**Kip State**

The state of this network entry.

**Kip Net Start**

The first AppleTalk network address in the range for this routing entry. This address is a two octet DDP network address in network byte order.

**Kip Net End**

The last AppleTalk network address in the range for this routing entry. This address is a two octet DDP network address in network byte order.

**Kip Share**

If the information in this entry is propagated to other routers as part of a routing protocol, the value of this variable is equal to “shared.” Otherwise its value is “private.”

**Kip Core**

The status of this network as a Kip Core network.

**Kip Hop Count**

The number of hops required to reach the destination network for this entry.

**Name Binding Protocol Table View**

**Access:** From the **Icon Subviews** menu for the *AppITkRtrApp* Application icon, select **NBP Table**.

This view displays the table of NBP services registered on this entity.

**Name Binding Index**

The index of this NBP entry. This value ranges from 1 to the number of NBP entries currently registered on this entity.

**Name Binding Object**

The name of the service described by this entity.

**Name Binding Type**

The type of service described by this entity.

**Name Binding Zone**

The zone the service described by this entity is registered in.

**Name Binding State**

The state of this NBP entry.

## ZIP Table View

**Access:** From the **Icon Subviews** menu for the *ApplTlkRtrApp* Application icon, select **ZIP Table**.

This view displays the relationship between network numbers and zone names.

### Zone Name

The ASCII zone name for this entry.

### Zone State

The state of this ZIP entry.

### Zone Net Start

The network that starts the range for this entry.  
This address is a two-octet DDP network address in network byte order.

### Zone Net End

The network that ends the range for this entry.  
This address is a two-octet DDP network address in network byte order. If the network to which this zip entry pertains is a Phase 1 network or a non-extended network, the value for Zone Net End will be two bytes of zero.

### Zone Index

An integer that is unique to the Zone Name that is present in this table entry. For any given zone name, every entry that has an equal Zone Name will have the same Zone Index.

## LocalTalk Interface Table View

**Access:** From the **Icon Subviews** menu for the *ApplTlkRtrApp* Application icon, select **LLAP Table**.

This view displays the following information for the LocalTalk Link Access Protocol (LLAP).

### Interface Index

The LLAP interface to which this entry pertains.

### In Packets

The total number of good packets received on this LocalTalk interface.

### Out Packets

The total number of packets transmitted on this interface.

### No Handler

The total number of good packets received for which there was no protocol handler.

### Length Errors

The total number of packets received whose actual length did not match the length in the header.

### Total In Errors

The total number of packets containing errors received.

**Total Collision**

The total number of collisions assumed due to the lack of a lapCTS reply.

**Total Defer**

The total number of times this interface deferred to other packets.

**No Data Errors**

The total number of times this interface received a lapRTS packet and expected a data packet, but did not receive any data packet.

**Random CTS Errors**

The total number of times this interface received a lapCTS packet that was not solicited by a lapRTS packet.

**FCS Errors**

The total number of times this interface received a packet with an FCS (Frame Check Sequence) error.

**ATPORT Table View**

**Access:** From the **Icon Subviews** menu for the *AppITlkRtrApp* Application icon, select **ATPORT Table**.

This view displays the following AppleTalk port information.

**Port Index**

A unique value for each AppleTalk port. Its value is between 1 and the total number of AppleTalk ports. The value for each port must remain constant at least from the re-initialization of the entity's network management system to the next re-initialization.

**Port Description**

A text string containing printable ASCII characters providing information about the port.

**Port Type**

The type of port, distinguished by the protocol immediately below DDP in the protocol stack.

**Start Net.Node**

The first AppleTalk network address in the range configured for this port. This is a two-octet DDP network address in network byte order.

**End Net.Node**

The last AppleTalk network address in the range configured for this port.

**Port Net Address**

The network address configured for this port.

**Port Status**

The configuration status of this port.

**Port Net Config**

The network configuration for this port.

**Port Zone Config**

The configuration status of the zone information for this port.

**Port Zone**

The port zone configured for this AppleTalk port.

**Port If Index**

The physical interface associated with this AppleTalk port.

**ARP Table View**

**Access:** From the **Icon Subviews** menu for the *AppITlkRtrApp* Application icon, select **ARP Table**.

This view displays information about the equivalence of AppleTalk Network Address to the link layer physical address for AppleTalk Address Resolution.

**ARP Interface Index**

The interface on which this entry's equivalence is effective.

**ARP Physical Address**

The media-dependent physical address.

**ARP Network Address**

The AppleTalk Network Address corresponding to the media-dependent physical address.

## AppleTalk Echo View

**Access:** From the **Icon Subviews** menu for the *ApplTlkRtrApp* Application icon, select **Echo**.

This view displays a single AppleTalk Echo Packets pie chart that shows the number of AppleTalk Echo packets from a network device that transmitted an Echo Request and the number of AppleTalk Echo packets from a network device that transmitted an Echo Reply.

## DECnet Routing Application

This application (CiscoDNApp) has seven Icon Subviews menu options. The **Detail** option provides access to pie charts that display standard Packet Breakdown, Error Breakdown, and Discard Breakdown information. The other options provide access to the following views:

- [Host Table View on Page 30](#)
- [Area Table View on Page 31](#)
- [Interface Cost Table View on Page 31](#)
- [DECnet Routing Level 1 View on Page 32](#)
- [DECnet Routing Level 2 View on Page 32](#)
- [DECnet Routing Hello View on Page 32](#)

## Host Table View

**Access:** From the **Icon Subviews** menu for the *CiscoDNApp* Application icon, select **Host Table**.

This view provides the following information.

### Host

The DECnet address of the host forwarding DECnet packets.

### Cost

The aggregate cost to reach the destination node.

**Hops**

The number of hops to reach the destination node.

**Interface**

The port number of the interface forwarding DECnet packets.

**Next Hop**

The node number of the next node to forward DECnet packets.

**Age**

The maximum time a DECnet packet can exist if not forwarded before being discarded.

**Priority**

The priority value for determining the default router. The DECnet protocol selects the router with the highest priority value for routing DECnet packets.

**Area Table View**

**Access:** From the **Icon Subviews** menu for the CiscoDNApp Application icon, select **Area Table**.

This view provides the following information.

**Host**

The DECnet address of the host forwarding DECnet packets.

**Cost**

The aggregate cost to reach the destination area.

**Hops**

The number of hops to reach the destination area.

**Interface**

The port number of the interface forwarding DECnet packets.

**Next Hop**

The node number of the next node to forward DECnet packets.

**Age**

The maximum time a DECnet packet can exist if not forwarded before being discarded.

**Priority**

The priority value for determining the default router. The DECnet protocol selects the router with the highest priority value for routing DECnet packets.

**Interface Cost Table View**

**Access:** From the **Icon Subviews** menu for the CiscoDNApp Application icon, select **Interface Cost**.

This view displays the DECnet circuit cost for each interface. Double-clicking on a column entry allows you to access the entry-specific Interface Cost Table view.

## DECnet Routing Level 1 View

**Access:** From the **Icon Subviews** menu for the CiscoDNApp Application icon, select **Level 1 Routing**.

This view displays a color-coded pie chart of the following DECnet Level 1 routing statistics:

- Received Packets
- Sent Packets
- Received Packets from another area
- Received Packets that contained errors

## DECnet Routing Level 2 View

**Access:** From the **Icon Subviews** menu for the CiscoDNApp Application icon, select **Level 2 Routing**.

This view displays a color-coded pie chart of the following DECnet Level 2 routing statistics.

- Received Packets
- Sent Packets
- Received Packets from another area

## DECnet Routing Hello View

**Access:** From the **Icon Subviews** menu for the CiscoDNApp Application icon, select **Hellos**.

This view displays a color-coded pie chart of the following DECnet Hello statistics:

- Received Hellos

- Sent Hellos
- Received Hellos from another area
- Received Hellos that contained errors



## IP Routing Application

This application, with exception of the IP Accounting Table view described below, is described in detail in **Miscellaneous Applications**.

### Cisco IP Accounting Table View

**Access:** From the **Icon Subviews** menu for the CiscoIPApp Application icon, select **Accounting**.

This view provides information about the network traffic flow between devices and includes a list of IP addresses. The IP Accounting Table view provides the following information.

#### Source

The source IP address for data transmitted to the destination IP address.

#### Destination

The destination IP address for data transmitted from the source IP address.

#### Packets

The total number of IP packets transmitted from the source IP address to the destination IP address.

#### Bytes

The total number of bytes transmitted from the source IP address to the destination IP address.

#### Checkpoint Accounting

This button allows you to access the Cisco Checkpoint Accounting Table. [Table 4](#) provides definitions for the fields presented in the Accounting Table.

**Table 4: Checkpoint View Information**

Field	Definition
Source	The source IP address for data transmitted to the destination IP address in the checkpoint matrix.
Destination	The destination IP address for data transmitted from the source IP address in the checkpoint matrix.
Packets	The number of IP packets transmitted from the source IP address to the destination IP address in the checkpoint matrix.
Bytes	The total number of bytes transmitted from the source IP address to the destination IP address in the checkpoint matrix.

## BGP4 Application

This application (CiscoRouter\_BGP4) provides the following application-specific subviews:

- [Peer Table on Page 34](#)
- [Path Attribute Table on Page 36](#)

### Peer Table

**Access:** From the **Icon Subviews** menu for the BGP4\_App Application icon, select **Peer Table**.

The BGP Peer Table contains information about the BGP peer.

#### Identifier

The BGP Identifier of the BGP peer.

#### State

The BGP peer connection state.

#### Admin Status

The desired state of the BGP connection. A transition from “stop” to “start” will cause the BGP Start Event to be generated. A transition from “start” to “stop” will cause the BGP Stop Event to be generated. This parameter can be used to restart BGP peer connections.

#### Negotiated Ver.

The negotiated version of BGP running between the two peers.

#### Local Addr.

The local IP address of this entry’s BGP connection.

#### Local Port

The local port for the TCP connection between the BGP peers.

#### Remote Addr

The remote IP address of this entry’s BGP peer.

#### Remote Port

The remote port for the TCP connection between the BGP peers.

#### Remote As

The remote autonomous system number.

#### In Updates

The number of BGP UPDATE messages received on this connection. This object should be initialized to zero (0) when the connection is established.

#### Out Updates

The number of BGP UPDATE messages transmitted on this connection. This object should be initialized to zero (0) when the connection is established.

#### In Total Message

The total number of messages received from the remote peer on this connection. This object

should be initialized to zero when the connection is established.

**Out Total Message**

The total number of messages transmitted to the remote peer on this connection. This object should be initialized to zero when the connection is established.

**Last Error**

The last error code and subcode seen by this peer on this connection. If no error has occurred, this field is zero.

**Established Tran**

The total number of times the BGP FSM transitioned into the established state.

**Established Time**

This timer indicates how long (in seconds) this peer has been in the Established state or how long since this peer was last in the Established state. It is set to zero when a new peer is configured or the router is booted.

**Retry Interval**

Time interval in seconds for the ConnectRetry timer.

**Hold Time**

Time interval in seconds for the Hold Timer established with the peer.

**Keep Alive**

Time interval in seconds for the Keep Alive timer established with the peer.

**Hold Time**

Hold Time Configured. Time interval in seconds for the Hold Time configured for this BGP speaker with this peer.

**Keep Alive**

Keep Alive Configured. Time interval in seconds for the Keep Alive timer configured for this BGP speaker with this peer.

**Min ASOrig. Int.**

Time interval in seconds for the MinASOrigination Interval timer. Suggested value for this timer is 15 seconds.

**Min Route Advert**

Time interval in seconds for the MinRouteAdvertisementInterval timer. Suggested value for this timer is 30 seconds.

**In Update Elapse**

Elapsed time in seconds since the last BGP UPDATE message was received from the peer.

## Path Attribute Table

**Access:** From the **Icon Subviews** menu for the BGP4\_App Application icon, select **Path Attribute Table**.

The BGP4 Received Path Attribute Table contains information about paths to destination networks received by all BGP peers.

### Peer

The IP address of the peer where the path information was learned.

### Ip Prefix Len

Length in bits of the IP address prefix in the Network Layer Reachability Information field.

### Ip Addr Prefix

An IP address prefix in the Network Layer Reachability Information field.

### Origin

The ultimate origin of the path information.

### ASPath Segment

The sequence of AS path segments.

### Next Hop

The address of the border router that should be used for the destination network.

### Multi Exit Disc

This metric is used to discriminate between multiple exit points to an adjacent autonomous system.

### Local Pref

The originating BGP4 speaker's degree of preference for an advertised route.

### Atomic Aggregate

Determines if the local system has selected a less specific route without selecting a more specific route.

### Aggregator AS

The AS number of the last BGP4 speaker that performed route aggregation.

### Aggregator Addr

The IP address of the last BGP4 speaker that performed route aggregation.

### Calc Local Pref

The degree of preference calculated by the receiving BGP4 speaker for an advertised route.

### Best

Indicates if this route was chosen as the best BGP4 route.

## Novell Routing Application

This application (CiscoNovellApp) has three menu options. The **Detail** selection provides access to pie charts that display standard Packet Breakdown, Error Breakdown, and Discard Breakdown information. The **SAP/IPX** selection opens a submenu that accesses the following views:

- [Novell Service Advertisement Protocol \(SAP\) View on Page 37](#)
- [Novell Internet Packet Exchange \(IPX\) View on Page 37](#)

## Novell Service Advertisement Protocol (SAP) View

**Access:** From the **Icon Subviews** menu for the CiscoNovellApp Application icon, select **SAP/IPX > SAP Chart**.

The view displays a color-coded pie chart of the following Novell SAP statistics:

- SAP Request Packets Transmitted
- SAP Reply Packets Transmitted
- SAP Request Packets Received
- SAP Reply Packets Received

## Novell Internet Packet Exchange (IPX) View

**Access:** From the **Icon Subviews** menu for the CiscoNovellApp Application icon, select **SAP/IPX > IPX Chart**.

This view includes the Check Point Accounting table, Accounting table, and additional Check Point Accounting and IPX Accounting information described below.

### Check Point Information

This section of the Novell (IPX) view provides the following information.

#### Check Point

The check point for the IPX accounting database. This MIB variable must be read and then set with the same value for the check point to succeed. The value read and then set will be incremented after a successful set request.

#### Check Point Age

The age of the data in the IPX checkpoint matrix.

### IPX Accounting Information

This section of the Novell (IPX) view provides the following information:

**Threshold**

The threshold of IPX accounting records in use before IPX traffic will be unaccounted.

**Age**

The age of the data in the IPX data matrix.

**Lost Bytes**

The total bytes of lost IPX packets.

**Lost Packets**

The lost IPX packets due to memory limitations.

**Check Point Accounting Table**

The list of IPX check point accounting entries. The fields for this table are described below.

**Source Address**

The IPX Source address for host traffic matrix.

**Destination Address**

The IPX Destination address for host traffic matrix.

**Number Packets**

The number of IPX packets sent from source to destination.

**Number Bytes**

The total number of bytes in IPX packets from source to destination.

**Accounting Table**

This table displays the list of IPX accounting entries. The fields in the Accounting Table are described below.

**Source Address**

The IPX Source address for host in the checkpoint traffic matrix.

**Destination Address**

The IPX Destination address for host in the checkpoint traffic matrix.

**Number Packets**

The number of IPX packets sent from source to destination in the checkpoint matrix.

**Number Bytes**

The total number of bytes in IPX packets from source to destination in the checkpoint matrix.

## Vines Routing Application

This application (CiscoVinesApp) has six menu options. The **Detail** selection provides access to pie charts that display standard Packet Breakdown, Error Breakdown, and Discard Breakdown information. The **Vines Specifics** selection opens a submenu that accesses the following views:

- [Vines Routing Echo View on Page 39](#)
- [Vines Routing ICP View on Page 39](#)
- [Vines Broadcast Detail View on Page 40](#)
- [Vines Rx View on Page 41](#)
- [Vines Tx View on Page 41](#)

### Vines Routing Echo View

**Access:** From the **Icon Subviews** menu for the CiscoVinesApp Application icon, select **Vines Specifics > Echos**.

This view displays a color-coded pie chart displaying a breakdown of Vines Echo statistics. [Table 5](#) provides definitions for the statistics presented by the pie chart.

**Table 5: Vines Echo Statistics**

Statistic	Definition
MAC In	The total number of Vines MAC level Echo packets received.
MAC Out	MAC level Echo packets transmitted.
Echo In	The total number of Vines Echo packets received.
Echo Out	The total number of Vines Echo packets transmitted.

### Vines Routing ICP View

**Access:** From the **Icon Subviews** menu for the CiscoVinesApp Application icon, select **Vines Specifics > ICP**.

This view displays a color-coded pie chart of Vines Interprocess Communications Protocol (ICP) statistics. [Table 6](#) provides definitions for the statistics presented by the pie chart.

**Table 6: Vines ICP Statistics**

Statistic	Definition
ICP In	The total number of Vines ICP packets received.
ICP Out	The total number of Vines ICP packets transmitted.
Metric Out	The total number of Vines ICP Metric Notification packets transmitted.

## Vines Broadcast Detail View

**Access:** From the **Icon Subviews** menu for the *CiscoVinesApp* Application icon, select **Vines Specifics > Broadcasts**.

This view displays a color-coded pie chart of Vines Broadcast statistics. [Table 7](#) provides definitions for the statistics presented by the pie chart.

**Table 7: Vines Broadcast Statistics**

Statistic	Definition
Forward	The total number of Vines broadcast packets forwarded.
Received	The total number of Vines broadcast packets received.
Transmitted	The total number of Vines broadcast packets transmitted.
Not LAN	The total number of Vines broadcast packets not forwarded to all interfaces because the LAN ONLY bit was set.
Not Forward	The total number of Vines broadcast packets not forwarded to all interfaces because the OVER 4800 BPS bit was set.
No Charge	The total number of Vines broadcast packets not forwarded to all interfaces because the NO CHARGES bit was set.



## Vines Rx View

**Access:** From the **Icon Subviews** menu for the CiscoVinesApp Application icon, select **Vines Specifics > Rx Table**.

This view provides the following information.

### Forwarded

The total number of incoming Vines packets forwarded to another interface.

### Format Error

The total number of incoming Vines packets containing header errors.

### Local Destination

The total number of incoming Vines packets destined for this router.

### Encapsulation Type

The Vines protocol default encapsulation type.

### Echo Count

The total number of incoming IPC Echo messages.

## Vines Tx View

**Access:** From the **Icon Subviews** menu for the CiscoVinesApp Application icon, select **Vines Specifics > Tx Table**.

This view provides the following information.

### Forwarded

The total number of outgoing Vines packets forwarded to another interface.

### Proxy Count

The total number of Proxy packets sent by this interface.

### Unicasts

The total number of unicast packets generated by this interface.

### IPC Count

The total number of IPC output messages sent by this interface.

### IPC Error Count

The total number of IPC Error messages sent by this interface.

### Broadcasts

The total number of broadcast packets generated by this interface.

B-casts Forwarded

The number of broadcast packets forwarded from another interface.

XNS Routing Application

This application (CiscoXNSApp) has two menu options that provide access to pie charts that display XNS statistics. Table 8 provides definitions for the statistics presented by the pie charts available for the **Echos** selection. The **Detail** selection provides access to pie charts that display standard Packet Breakdown, Error Breakdown, and Discard Breakdown information.

Table 8: XNS Echo Statistics

Statistic	Definition
Replies Rec	The total number of XNS Echo reply packets received.
Replies Sent	The total number of XNS Echo reply packets transmitted.
Request Rec	The total number of XNS Echo request packets received.
Request Out	The total number of XNS Echo request packets transmitted.

Cisco BSTUN Application

This application (CiscoBSTUNApp) has three menu options that provide access to the following views:

- [BSTUN Groups View on Page 42](#)
- [BSTUN Ports View on Page 43](#)
- [BSTUN Routes View on Page 44](#)

These views provide configuration and operational information on the blocked tunneling implementation.

BSTUN Groups View

**Access:** From the **Icon Subviews** menu for the CiscoBSTUNApp Application icon, select **BSTUN Groups**.

This view identifies the group number and protocol type that Cisco A and Cisco B use to route BSC (Binary Synchronous Communication) traffic over the IP network. The group number must be the same in Cisco A and Cisco B to route traffic from one router to the other.

The following information is available from this view.

Index

The configured BSTUN (Block Serial Tunneling) group number. The significance of this number is that it must match the BSTUN Group number

configured in the router at the other end of the BSTUN tunnel.

### Type

The protocol type for this BSTUN group.

### Local Ack

Indicates whether the BSTUN connection is locally acknowledged (True) or not locally acknowledged (False).

### Unroutable Transmit

The number of unroutable frames received by this group from the remote partner. They were unroutable because the address was not recognized; that is, there is no BSTUN route command configured for this address. This indicates that the configuration in this router is incompatible with the peer router.

### Unroutable Receive

Count of frames received from a serial interface with an unsupported poll address. Note that there may be several ports configured within this BSTUN group; a non-zero value in this field indicates that at least one of these ports is receiving frames for which there are no BSTUN route commands configured. This indicates that the configuration in this router is incompatible with the configuration in at least one of the attached devices.

## BSTUN Ports View

**Access:** From the **Icon Subviews** menu for the CiscoBSTUNApp Application icon, select **BSTUN Ports**.

This view identifies the serial interface to the BSC line for which the router is providing serial tunneling. It also identifies the BSTUN group that the interface is in and the default routing for unrecognized BSC addresses.

The following information is available from this view.

### Group

The group number to which the BSTUN port belongs. Frames will only be routed to other ports (on this or another router) in the same BSTUN group.

### Default Peer Type

The type of identification of the remote default partner.

### Default Peer IP

The IP address of the remote default BSTUN partner, for unrecognized addresses.

## BSTUN Routes View

**Access:** From the **Icon Subviews** menu for the *CiscoBSTUNApp* Application icon, select **BSTUN Routes**.

This view displays an entry for each address device for routing within the BSTUN group and an entry for default routing if the “bstun route all” command is configured. The following information is available for this view.

### Group

The index of the BSTUN Group owning this station.

### Address

The poll address of the station. A value of “256” indicates the presence of the ALL parameter on the STUN ROUTE command, which is the route for all unrecognized addresses.

### Type

The type of identification of the remote partner.

### IP

The IP address of the remote BSTUN partner.

### Priority

The priority with which this station’s traffic will be routed across the network.

### Peer State

The state of the peer connection through the BSTUN tunnel.

### Rx Packets

Count of frames received from the serial interface with this station’s address.

### Tx Packets

Count of frames transmitted at the serial interface with this station’s address.

### Rx Bytes

Count of bytes received from the serial interface with this station’s address.

### Tx Bytes

Count of bytes transmitted at the serial interface with this station’s address.

## Cisco STUN Application

This application (CiscoSTUNApp) has three menu options that provide access to the following views. These views provide configuration and operational information on the blocked tunneling implementation.

- [STUN Group View on Page 45](#)
- [STUN Port View on Page 45](#)
- [STUN Route View on Page 46](#)

## STUN Group View

**Access:** From the **Icon Subviews** menu for the CiscoSTUNApp Application icon, select **STUN Group Table**.

This view identifies the STUN (Serial Tunneling) group number and protocol type that Cisco A and Cisco B use to route SDLC traffic over the IP network. The table contains an entry for each STUN group defined on the router.

### Group Index

The configured STUN group number.

### Protocol Type

The protocol type for this STUN group.

### STUN IP Address

The configured IP address used for all serial tunnelling in this router.

## STUN Port View

**Access:** From the **Icon Subviews** menu for the CiscoSTUNApp Application icon, select **STUN Port Table**.

This view identifies the serial interface to the SDLC line for which the router is providing serial tunneling. It also identifies the STUN group that the interface is in and the default routing for unrecognized SDLC addresses.

### Group Index

The group number to which the STUN port belongs. Frames will only be routed to other ports (on this or another router) in the same STUN group.

### Default Peer Type

The type of identification of the default partner for unrecognized addresses.

### Default Peer IP

The IP address of the remote default STUN partner, for unrecognized addresses.

### Default Peer Serial IF

If the STUN Route Type is “serial” then this is the serial interface index of the point-to-point link to the remote partner; if STUN Route Type is “serialDirect” then the partner is in the local STUN; if STUN Route Type is “ip” then this field is “0.”

## STUN Route View

**Access:** From the **Icon Subviews** menu for the *CiscoSTUNApp* Application icon, select **STUN Route Table**.

This view displays a table with information about specific Synchronous Data Link Control (SDLC) addresses. There is one table entry for each SDLC address configured by the STUN ROUTE command.

### Station Addr

The poll address of the station. The variable “256” indicates the ALL parameter on the STUN Route command, which is the route for all unrecognized addresses.

### Type

The type of identification of the remote partner.

### Remote IP

The IP address of the remote STUN partner.

### Serial IF

The local interface index to the remote partner.

### Priority

The priority with which this station’s traffic will be routed across the network.

### Peer State

The state of the peer connection through the STUN tunnel.

### Local Ack

Indicates if the STUN connection is locally acknowledged.

### Rx Packets

Count of frames received from the serial interface with this station’s address.

### Tx Packets

Count of frames transmitted at the serial interface with this station’s address.

### Rx Bytes

Count of bytes received from the serial interface with this station’s address.

### Tx Bytes

Count of bytes transmitted at the serial interface with this station’s address.

## Optional Applications

The following device-specific applications supported by the MC3810 devices are described in this section:

- [Cisco Chassis Application on Page 47](#)
- [Cisco Modem Application on Page 49](#)
- [Cisco Flash Application on Page 59](#)
- [Cisco Ping Application on Page 63](#)
- [Cisco Queue Application on Page 65](#)
- [ATM Client Application on Page 67](#)
- [EnvMon Application on Page 69](#)
- [FDDI Application on Page 71](#)
- [Discovery Application on Page 73](#)
- [Cisco DS1APP1406 Application on Page 74](#)
- [Cisco RFC1317 Application on Page 80](#)
- [Cisco Terminal Server Application on Page 82](#)

## Cisco Chassis Application

This application (CiscoChasApp) has two menu options that provide access to the following views.

- [Cisco Chassis Card View on Page 47](#)
- [Cisco Chassis General Information View on Page 48](#)

### Cisco Chassis Card View

**Access:** From the **Icon Subviews** menu for the CiscoChasApp Application icon, select **Card Information**.

This view provides information on the cards contained in the chassis.

#### Slot

The slot number in which this card is installed. If the slot number is not applicable or not determinable, this field will display “-1.”

#### Type

The functional type of the card installed in this slot.

#### Description

A textual description of this card.

#### Software Ver.

The version number of the firmware installed on this card. If no version number is available, this field will remain empty.

**Hardware Ver.**

The hardware revision level of this card. If no revision level is available, this field will remain empty.

**Serial No.**

The serial number of this card. If no serial number is available, this field will contain a zero.

## Cisco Chassis General Information View

**Access:** From the **Icon Subviews** menu for the CiscoChasApp Application icon, select **General**.

This view displays information on the chassis in which the router is installed. This view is divided into the three sections described below.

### Chassis Information

This section of the Chassis General Information view provides the following physical information about the chassis.

**Hardware Revision Level**

The version number of the chassis hardware. If the version number is not available, this field will remain empty.

**Chassis Type**

The type of chassis. Possible chassis types are: Unknown, Multibus, Agsplus, Igs, c2000,

c3000, c4000, c7000, cs-500, c7010, c2500, and c4500.

**Chassis ID/Serial No.**

A unique identifier for this chassis. The default value is the serial number of the chassis. If no serial number is available and no alternative ID has been set for the chassis, this field will remain empty.

**Number of Chassis Slots**

The number of slots in this chassis model.

### ROM Information

This section of the Chassis General Information view provides the following information about the ROM installed in the chassis:

**ROM Monitor Version**

The version number of the ROM monitor.

**ROM Software Version**

The version number of the ROM system software. If no version number is available, this field will remain empty.

**Config Register**

The current value of the configuration register.



## RAM Information

This section of the Chassis General Information view provides the following information about the RAM installed in the chassis:

### System CPU RAM (bytes)

The amount of RAM available to the CPU, in bytes.

### Non-volatile RAM Used (bytes)

The amount of non-volatile configuration memory in use, in bytes.

### Non-volatile RAM Size (bytes)

The total size, in bytes, of non-volatile configuration memory.

## Cisco Modem Application

This application (CiscoModemApp) has five menu options that provide access to the following views.

- [Modem System Information View on Page 49](#)
- [Modem Line Status Table View on Page 51](#)
- [Modem Line Configuration Table View on Page 55](#)
- [Modem Line Statistics Table View on Page 57](#)
- [Modem Line Speed Statistics Table View on Page 58](#)

## Modem System Information View

**Access:** From the **Icon Subviews** menu for the CiscoModemApp Application icon, select **System Info**.

### Installed Modem

The actual number of modems that are currently installed within this system.

### Configured Group

The actual number of modem groups that are currently configured within this system.

### Watchdog Time

A passive software watchdog timer value will be used to recover a modem that enters into an unexpected state and hangs. When this watchdog timer times out, the modem associated Call

Processing state will be set back to “IDLE,” all related Time Division Multiplexing (TDM) paths will be restored to default configurations, and all call processing related actions will stop for the modem.

**Status Poll Time**

The ideal time interval between modem status polling via the out-of-band management port.

**Max Retries**

A reply event is expected to be received for every message sent to the modem through the out-of-band management port. If an expected reply event is not received, the message will be sent to the modem again. This object specifies the maximum number of retries that will be executed.

**Modems In Use**

The number of modems in the system that are in the following states: `connected`, `offHook`, `loopback`, or `downloadFirmware`.

**Modems Available**

The number of modems in the system that are in the `onHook` state, that is, they are ready to accept a call.

**Modems Unavailable**

The number of modems in the system that cannot accept calls. These modems are in a state other

than the following: `connected`, `offHook`, `loopback`, or `downloadFirmware`.

**Modems Offline**

The number of modems in the system that have been held administratively offline.

**Modems Dead**

The number of modems in the system with the state equal to `bad` or `downloadFirmwareFailed`.

## Modem Line Status Table View

**Access:** From the **Icon Subviews** menu for the *CiscoModemApp* Application icon, select **Line Status Table**.

### Interface

The interface to which this modem is connected.

### Group

The modem group number that the modem may be in.

### Manufacturer ID

A textual description to identify the modem, including the manufacturer’s name and type of modem.

### Product Details

A textual description of the modem, including hardware revision number, firmware revision number, feature set, and—optionally— its serial number.

### Manageable

The Manageable modem allows access through the out of band management port in which the modem statistic data can be retrieved, and the Direct Connect session can be used to provide the test and debugging ability. This object indicates whether this modem is a Manageable modem.

### State

Indicates the current state of the modem. The meaning of each state code is explained in the [Table 9](#).

**Table 9: Modem States**

State	Meaning
unknown	The current state of the modem is unknown.
onHook	The modem is in a state similar to hanging up a telephone receiver. The call cannot enter a connected state when the modem is onHook.
offHook	The modem is in a state similar to picking up a telephone receiver to dial or answer a call.
connected	The modem is in a state where it can transmit or receive data over the communications line.
busiedOut	The modem is busied out (i.e., taken out of service) and cannot make outgoing calls or receive incoming calls.

**Table 9: Modem States (Continued)**

State	Meaning
disabled	The modem is in a reset state and non-functional. This state can be set and cleared via cmHoldReset.
bad	The modem is suspected or proven to be bad. The operator can take the modem out of service and mark the modem as “bad” via cmBad.
loopback	The modem is in a state where it is currently running back-to-back loopback testing.
downloadFirmware	The modem is in a state where it is currently downloading the firmware.
downloadFirmwareFailed	The modem is not operational because the downloading of firmware to it has failed.

**Call Direction**

The modem can be used either as an incoming call or outgoing call. This object specifies the direction of the current or previous call.

**Disconnect Reason**

Indicates the reason that the last connection or call attempt disconnected. The meaning of each reason code is explained in [Table 10](#).

**Table 10: Disconnect Reasons**

Reason Code	Meaning
unknown	The failure reason is unknown or there has been no previous call.
lostCarrier	The call was disconnected because of the loss of a carrier.
noCarrier	The dial out attempt has failed because the modem detects no carrier.
noDialTone	The dial out attempt has failed because modem failed to detect a dial tone.
busy	The call attempt failed because the modem detected a busy signal.
modemWatchdogTimeout	The modem internal watchdog timer has expired.
dtrDrop	DTR has been turned off while the modem is disconnected on DTR drop.

**Table 10: Disconnect Reasons (Continued)**

Reason Code	Meaning
userHangup	Normal disconnect where the user hangs up call.
compressionProblem	The call is disconnected due to a problem detected during compression in the modem.
retrainFailure	The modem did not successfully train and reach data mode on the previous connections.
remoteLinkDisconnect	The remote link disconnected the connection.
abort	The call was aborted.
inactivityTimeout	The modem automatically hangs up because data is not sent or received within the inactivity time out.
dialStringError	The dialed phone number is invalid.
linkFailure	The modem detects a link failure.
modulationError	The modem detects a modulation error.
dialTimeout	The modem times out while attempting to dial.

**Table 10: Disconnect Reasons (Continued)**

Reason Code	Meaning
remoteHangup	The remote side hangs up the connection.
trainupFailure	Failure to train up with a remote peer.
fallbackTerminate	User has EC fallback set to disconnect.
excessiveEC	Link loss due to excessive EC retransmissions.
hostDrop	Host initiated link drop.
terminate	Lost Carrier Microcom HDMS product relating to password security issues.
autoLogonError	An autologon sequence did not complete successfully.
ccpNotSeen	The Credit Card Prompt was not detected.

**Table 10: Disconnect Reasons (Continued)**

Reason Code	Meaning
callbackFailed	A switched line dialback occurred due to a leased line connection failure, thus the switched line connection also failed and a connection can still not be made on the leased line.
blacklist	In countries that support blacklisting, an attempt was made to go off hook with a null dial string (ATD).
mnp10ProtocolError	MNP10 Protocol Error
lapmProtocolError	LAPM Protocol Error
faxClass2Error	Fax Class 2 Error

**Call Duration**

This object specifies the call duration of the current or previous call.

**Call Phone Number**

The dialed outgoing telephone number of the current or previous call.

**Caller ID**

The incoming caller identification of the current or previous call.

**Modulation Scheme Used**

The modem modulation scheme used in the current or previous call. This object exists only for modems which have the `cmManageable` object set to “true.”

**Protocol Used**

The modem protocol used in the current or previous call. This object exists only for modems that have the `cmManageable` object set to “true.”

**TXRate**

The modem transmit rate of the current or previous call in bits per second. This object exists only for modems that have the `cmManageable` object set to “true.”

**RXRate**

The modem receive rate of the current or previous call in bits per second. This object exists only for modems that have the `cmManageable` object set to “true.”

**TXAnalog Signal Level**

The modem transmit analog signal level in the current or previous call. This object exists only for modems that have the `cmManageable` object set to “true.”

**RXAnalog Signal Level**

The modem receive analog signal level in the current or previous call. This object exists only for

modems that have the `cmManageable` object set to “true.”

## Modem Line Configuration Table View

**Access:** From the **Icon Subviews** menu for the *CiscoModemApp* Application icon, select **Line Configuration Table**.

This table shows objects that describe configuration information for the modem.

### Index

Sequential number identifying a particular modem.

### AT Mode Permit

Direct Connect session is used for testing and debugging purposes by using the modem AT commands through the out-of-band management port when `cmManageable` is set to “true.” This object specifies whether the Direct Connect session is permitted to be used at this modem. If `cmManageable` is “true” (1), Direct Connect session via the out of band port is allowed; if “false” (2), Direct Connect session is not allowed for the modem.

### Status Polling

Modem status and events can be polled through the out of band management port when the `cmManageable` is set to “true.” This object specifies whether this status polling feature is enabled at this modem. If `cmManageable` is “true”

(1), status polling will occur for the modem; if “false” (2) no status polling will occur.

### **Busy Out Request**

This object is used to put the modem out of service, i.e. modem cannot make calls or answer calls. If the modem to be busyout is handling a call, the busyout action will be taken after the current call is disconnected. After the modem is in the busyout state, the following commands can be applied to those modems: reset, bad modem, download modem firmware, etc. This is called “nice” or “graceful” busyout. The value of “true” (1) indicates the busyout request has been issued to the modem, but the busyout could be pending. The management entity needs to query the cmState to see if the modem is successfully busied out. The value of “false” (2) indicates the modem has not been given the busyout command.

### **Shutdown**

This object is used to put the modem out of service — i.e., modem cannot make calls or answer calls. This is a “hard” busyout command to bring the modem out of service immediately without waiting for the call to be ended normally. After the modem is shut down, the following commands can be applied to those modems: reset, bad modem, download modem firmware, etc. The value of “true” (1) indicates the hard

busyout has been issued to the modem. The value of “false” (2) indicates the modem has not been given a hard busyout command.

### **Hold Reset**

A command hold-reset will put the state of modem into reset mode until an inverse command is given to bring the modem out of RESET mode. During the period of reset mode, the modem cannot be used. This object is only valid when cmState is onHook, busiedOut, or disabled. The value of “true” (1) attempts to put the modem in reset mode, and the value of “false” (2) takes the modem out of reset.

### **Bad**

This object can hold the modem out of service and marks the modem as suspected or proven to be bad. During the router start-up initialization sequence, modem back-to-back tests will test modems and mark those modems failing tests as bad modems. The management entity also can use this command to lock out the suspect modem or unlock the modem to further debug or test. This object is only valid when cmState is onHook or busiedOut. The value of “true” (1) indicates the modem is suspected to be bad and its state is set to bad. The value of “false” (2) indicates the modem has not been suspected to be bad or has been remarked as good.



## Modem Line Statistics Table View

**Access:** From the **Icon Subviews** menu for the *CiscoModemApp* Application icon, select **Line Statistics Table**.

This table contains objects that describe the status of the modem.

### Index

Sequential number identifying a single modem.

### Ring No Answers

The number of calls where ringing was detected but the call was not answered at this modem.

### In Connect Failures

The number of incoming connection requests that this modem answered but for which it could not train with the other Data Communications Equipment (DCE). This object exists only for modems that have the `cmManageable` object set to “true.”

### In Connect Completions

The number of incoming connection requests that this modem answered and successfully trained with the other DCE. This object exists only for modems that have the `cmManageable` object set to “true.”

### Out Connect Failures

The number of outgoing calls from this modem that successfully went off hook and dialed, but for which it could not train with the other DCE. This object exists only for modems that have the `cmManageable` object set to “true.”

### Out Connect Completions

The number of outgoing calls from this modem that resulted in successfully training with the other DCE. This object exists only for modems that have the `cmManageable` object set to “true.”

### Failed Dial Attempts

The number of call attempts that failed because the modem did not go off hook, or because there was no dial tone.

### No Dial Tones

The number of times the dial tone was expected but was not received. This object exists only for modems that have the `cmManageable` object set to “true.”

### Dial Timeouts

The number of times the dial time-out occurred. This object exists only for modems that have the `cmManageable` object set to “true.”

### Watchdog Timeout

The number of times the Call Processing watchdog timer has expired.

### 2400 Or Less Connections

The number of connections initially established at a modulation speed of 2400 bits per second or less. This object exists only for modems that have the `cmManageable` object set to “true.”

### 2400 To 14400 Connections

The number of connections initially established at a modulation speed of greater than 2400 bits per second and less than 14400 bits per second. This object exists only for modems that have the `cmManageable` object set to “true.”

### More Than 14400 Connections

The number of connections initially established at a modulation speed of greater than 14400 bits per second. This object exists only for modems that have the `cmManageable` object set to “true.”

### No Carriers

The number of times the disconnect reason is no carrier. This object exists only for modems that have the `cmManageable` object set to “true.”

### Link Failures

The number of times that the disconnect reason is link failure. The object exists only for modems that have the `cmManageable` object set to “true.”

### Protocol Errors

The number of times that the out of band protocol error occurred. This object exists only for modems that have the `cmManageable` object set to “true.”

### Polling Timeouts

The number of times that the out of band protocol time-out error occurred. This object exists only for modems that have the `cmManageable` object set to “true.”

## Modem Line Speed Statistics Table View

**Access:** From the *Icon Subviews* menu for the *CiscoModemApp* Application icon, select **Line Speed Stats Table**.

This table displays a collection of objects that describe the initial modem line speeds and connections.

### Index

Sequential number identifying a single modem.

### Line Connections

The number of connections initially established at a given modulation speed. An instance of this object will only be present for those speeds where one or more connections have occurred.

### Tx Line Connections

The number of Transmit connections initially established at a given modulation speed. An instance of this object will only be present for those speeds where one or more connections have occurred.

### Rx Line Connections

The number of Receive connections initially established at a given modulation speed. An instance of this object will only be present for those speeds where one or more connections have occurred.

## Cisco Flash Application

This application (CiscoFlashApp) supports the flash memory used by the Cisco MC3810. It has eight options that provide access to the following views:

- [Cisco Flash Configuration View on Page 59](#)
- [Flash Device Chip Properties Table View on Page 60](#)
- [Flash Copy Operations Table View on Page 61](#)
- [Flash Device Properties Table View on Page 61](#)
- [Flash File Properties Table View on Page 62](#)
- [Flash Miscellaneous Operations Table View on Page 62](#)
- [Flash Device Partition Properties Table View on Page 62](#)
- [Flash Partitioning Operations Table View on Page 63](#)

## Cisco Flash Configuration View

**Access:** From the **Icon Subviews** menu for the CiscoFlashApp Application icon, select **Flash Configuration**.

This view provides the following information.

### Flash Size (Bytes)

Total size, in bytes, of flash memory.

**Available (Bytes)**

Unused size, in bytes, of flash memory.

**Flash write**

The current write permission is “Disabled” or “Enabled.”

**Flash Directory**

This table within the Flash Configuration view, provides the following information.

**Name**

The flash device name.

**Size**

The total size of the flash device.

**Status**

The status of the flash device.

There are also seven buttons that access the additional Flash views or you can access these views from the Icon Subviews menu for the CiscoFlashApp Application. The buttons are: Copy Operations, Misc Operations, Device Properties, Chip Properties, Partition Properties, Partitioning Operations, and File Properties.

**Flash Device Chip Properties Table View**

**Access:** From the **Icon Subviews** menu for the *CiscoFlashApp* Application icon, select **Chip Properties**.

This view displays the following flash device chip information for each initialized flash device.

**Description**

The flash chip name corresponding to the chip code.

**Write Retries**

A cumulative count of write retries done on this chip.

**Erase Retries**

A cumulative count of erase retries done on this chip.

## Flash Copy Operations Table View

**Access:** From the **Icon Subviews** menu for the *CiscoFlashApp* Application icon, select **Copy Operations**.

This view displays the following information.

### Command

The copy command to be executed.

### Protocol

The protocol to be used for any copy. Default is `tftp`.

### Server Address

The server address for any copy. Default is `255.255.255.255`.

### Source Name

The source file name, either flash or on a server.

### Destination Address

The destination address for any copy.

### Remote User

The remote user name for copy through rcp protocol.

### Copy Status

The status of the specified copy operation.

### Notify On Completion

Whether a notification should be generated on the completion of the copy operation.

## Entry Status

The status of this table entry.

## Flash Device Properties Table View

**Access:** From the **Icon Subviews** menu for the *CiscoFlashApp* Application icon, select **Device Properties**.

This view displays the following information.

### Name

The Flash device name.

### Partitions

Number of partitions present.

### Descriptions

System Flash (primary) and Boot Flash (secondary).

### Controller

The card that controls Flash read/write/erase.

### Card

Index for the card in the card table.

### Jumper

The state of the jumper that controls the programming voltage to the Flash device. Possible values include: “unknown”(3) where a programming jumper is not present or not required or, “Installed”(1), or “notInstalled”(2)

where the programming jumper state can be read back via a hardware register.

**Init Time**

The time (system time) the device was initialized.

## Flash File Properties Table View

**Access:** From the **Icon Subviews** menu for the *CiscoFlashApp* Application icon, select **File Properties**.

This view displays the following information for the files in a flash partition.

**Name**

The name for the file specified by the user copying in the file.

**Size**

The size of the file in bytes.

**Status**

The status of the file.

## Flash Miscellaneous Operations Table View

**Access:** From the **Icon Subviews** menu for the *CiscoFlashApp* Application icon, select **Miscellaneous Operations**.

This view displays the following information.

**Command**

The command to be executed.

**Destination**

The destination file.

**Status**

The status of the specified operation.

**Notify On Completion**

Whether a notification should be generated on the completion of the copy operation.

**Entry Status**

The status of this table entry.

**Time**

The time taken for the operation.

## Flash Device Partition Properties Table View

**Access:** From the **Icon Subviews** menu for the *CiscoFlashApp* Application icon, select **Partition Properties**.

This view displays the following information.

**Name**

The name for this partition used by the system.

**Start Chip**

The chip sequence number for the first chip in the partition.

**End Chip**

The chip sequence number for the last chip in the partition.

**Size**

The flash partition size.

**File Count**

The number of files in the partition.

**Checksum Algorithm**

The identifier for the checksum method used by the file system. When a file system writes a file to flash, it checksums the data written.

## Flash Partitioning Operations Table View

**Access:** From the **Icon Subviews** menu for the *CiscoFlashApp* Application icon, select **Partitioning Operations**.

This view displays the following information.

**Command**

The partitioning command to be executed.

**Destination**

The destination device name.

**Partition Count**

The number of partitions to be created.

**Partition Sizes**

The size of each partition to be created.

**Status**

The status of the specified partitioning process.

**Notify On Completion**

Whether a notification should be generated on the completion of the copy operation.

**Entry Status**

The status of this table entry.

**Time**

The time taken for the operation.

## Cisco Ping Application

This application (CiscoPingApp) provides access to the Ping Request Table View.

### Ping Request Table View

**Access:** From the **Icon Subviews** menu for the *CiscoPingApp* Application icon, select **Ping Request Entry Table**.

This view allows you to update the ping request list for this device. The following information is available for this view:

**Owner**

The user who configured this entry.

**Protocol**

The protocol to use once an instance of this object is created e.g., Novell, Apple Talk, Vines, etc.

**Address**

The address of the device to be pinged.

**Status**

The status of this table entry. Possible states are: `active`, `notInService`, `notReady`, `createAndGo`, `createAndWait`, and `destroy`.

**Pkt Cnt**

Specifies the number of ping packets to send to the target device in this sequence.

**Pkt Sz**

Specifies the size of ping packets to send to the target device in this sequence.

**Pkt Timeout**

Specifies the amount of time to wait for a response to transmitted packet before declaring the packet dropped.

**Delay**

Specifies the minimum amount of time to wait before sending the next packet in a sequence after receiving a response or declaring a timeout for a previous packet.

**Trap On**

Specifies whether or not a `ciscoPingCompletion` trap should be issued on completion of the sequence of pings.

**Pkts Sent**

The number of ping packets that have been sent to the target.

**Pkts Rcvd**

The number of ping packets that have been received from the target in this sequence.

**Min RTT**

The minimum round trip time in milliseconds of all the packets that have been sent in this sequence.

**Avg RTT**

The average round trip time in milliseconds of all the packets that have been sent in this sequence.

**Max RTT**

The maximum round trip time in milliseconds of all the packets that have been sent in this sequence.

**Completed**

Indicates (true) that all the packets in this sequence have been either responded to or timed out.



**Add an Entry**

This button opens the Add Ping Request dialog box. Enter the following information and click the **Add Request** button to add an entry to the Ping Request Entry Table:

- Address
- Owner
- Packet Count
- Packet Size
- Packet Timeout
- Delay
- Protocol
- Trap on Completion

## Cisco Queue Application

This application (CiscoQueueApp) has three menu options that provide access to the information used to manage interface queuing within this device.

- [Queue Interface View on Page 65](#)
- [Queue Statistics View on Page 66](#)
- [Queue Rotation Interface View on Page 66](#)

## Queue Interface View

**Access:** From the **Icon Subviews** menu for the CiscoQueueApp Application icon, select **Queue Interface**.

This view provides the following information on the queues for a particular Cisco interface.

### IF

The IF index for this interface.

### Type

The type of queuing used in the hold queue.

### Maximum Number of Msgs

The maximum number of messages placed in the hardware transmission queue.

### Number of Sub-Queues

The number of sub-queues from which the hold queue is built.

## Queue Statistics View

**Access:** From the **Icon Subviews** menu for the *CiscoQueueApp* Application icon, select **Queue Statistics**.

This view provides the following statistical information on the queues for a particular Cisco interface.

### Sub-Queue Attrs

A list of sub-queue attributes for an interface.

### Number of Msgs

The number of messages in the sub-queue.

### Maximum Permitted Msgs

The maximum number of messages permitted in the sub-queue.

### Number of Msgs Discarded

The number of messages discarded from this queue since restart.

## Queue Rotation Interface View

**Access:** From the **Icon Subviews** menu for the *CiscoQueueApp* Application icon, select **Rotation Interface**.

This view provides the following information on the rotation of custom queues for a particular Cisco interface.

### Statistics Queue Number

Custom queuing sub-queue attributes for an interface.

### Number of Transmitted Octets

The number of octets that may be transmitted from a custom queuing sub-queue before it must yield to another queue.

## ATM Client Application

This application (ATMClientApp) has four menu options that provide access to the following views:

- [VCL Table on Page 67](#)
- [ATM Link Modeling Options on Page 68](#)

## VCL Table

**Access:** From the **Icon Subviews** menu for the *ATMClientApp* Application icon, select **VCL Table**.

This view opens the ATM Client Application Virtual Channel Link (VCL) view with the following information.

### If Index

An entry in the VCL Table.

### VPI

The Virtual Path Identifier (VPI) value of the VCL.

### VCI

The Virtual Channel Identifier (VCI) value of the VCL.

### Admin Status

This object is implemented only for a VCL that terminates a VCC (i.e., one that is not cross-connected to other VCLs). Its value specifies the desired administrative state (up or down) of the VCL.

### Oper Status

This object indicates the current operational status (up, down, or unknown) of the VCL.

### Last Change

The value of MIB II's System Up Time object at the time this VCL entered its current operational state. If the current state was entered prior to the last re-initialization of the agent, then this object contains a zero value.

### Rcv Descr Index

The value of this object identifies the row in the ATM Traffic Descriptor Table that applies to the receive direction of this VCL.

### Xmit Descr Index

The value of this object identifies the row of the ATM Traffic Descriptor Table that applies to the transmit direction of this VCL.

### AAL Type

The type of AAL used on this VCC. An instance of this object only exists when the local VCL endpoint is also the VCC endpoint, and AAL is in use.

### Transmit Size

The maximum AAL5 CPCS SDU size in octets that is supported on the transmit direction of this VCC. An instance of this object only exists when

the local VCL end-point is also the VCC endpoint, and AAL5 is in use.

### Receive Size

The maximum AAL5 CPCS SDU size in octets that is supported on the receive direction of this VCC. An instance of this object only exists when the local VCL end-point is also the VCC endpoint, and AAL5 is in use.

### Encaps Type

The type of data encapsulation used over the AAL5 SSCS layer. An instance of this object only exists when the local VCL endpoint is also the VCC end-point, and AAL5 is in use.

### Cross Connect Id

This object is implemented only for a VCL that is cross-connected to other VCLs that belong to the same VCC.

### Row Status

This object is used to create, delete, or modify a row in this table. To create a new VCL, this object is initially set to “createAndWait” or “createAndGo.”

### Row Status Procedure

This procedure provides step-by-step instructions to create or remove channel information.

## ATM Link Modeling Options

**Access:** From the **Icon Subviews** menu for the *ATMClientApp* Application icon, select **ATM Link Modeling Options**.

This view provides you with two fields; **Create Link Models** and **Config Interval** and two buttons; **Reconfigure Now** and **Option Explanations**.

Select **Option Explanations** for a brief explanation of **Create Link Models**, **Config Interval**, and **Reconfigure Now**.

## EnvMon Application

This application (CiscoEnvMonApp) has five menu options that provide access to the following views:

- [Enable Notifications on Page 69](#)
- [Fan Status on Page 69](#)
- [Power Supply Status on Page 69](#)
- [Temperature Status on Page 70](#)
- [Voltage Status on Page 70](#)

### Enable Notifications

**Access:** From the **Icon Subviews** menu for the CiscoEnvMonApp Application icon, select **Enable Notifications**.

This view allows you to enable or disable system notifications.

#### Shutdown

This variable indicates whether the system produces the Shutdown Notification.

#### Voltage

This variable indicates whether the system produces the Voltage Notification.

#### Redundant Supply

This variable indicates whether the system produces the Redundant Supply Notification.

#### Temperature

This variable indicates whether the system produces Temperature Notification.

#### Fan

This variable indicates whether the system produces the Fan Notifications.

### Fan Status

**Access:** From the **Icon Subviews** menu for the CiscoEnvMonApp Application icon, select **Fan Status**.

This table provides the fan status maintained by the environmental monitor. The **Description** identifies the fan being instrumented and the **State** identifies the current state of the fan being instrumented.

### Power Supply Status

**Access:** From the **Icon Subviews** menu for the CiscoEnvMonApp Application icon, select **Power Supply Status**.

This table provides the power supply status maintained by the environmental monitor card. The **Description** identifies the power supply being instrumented and the **State** identifies the current state of the power supply being instrumented.

## Temperature Status

**Access:** From the **Icon Subviews** menu for the CiscoEnvMonApp Application icon, select **Temperature Status**.

This table provides the ambient temperature status maintained by the environmental monitor.

### Description

The testpoint being instrumented.

### Value

The current measurement of the testpoint being instrumented.

### Threshold

The highest value that the associated instance of the object Status Value may obtain before an emergency shutdown of the managed device is initiated.

### @ Last Shutdown

The value of the associated instance of the object Status Value at the time an emergency shutdown of the managed device was last initiated. This value is stored in non-volatile RAM and is therefore able to survive the shutdown.

### State

The current state of the testpoint being instrumented.

## Voltage Status

**Access:** From the **Icon Subviews** menu for the CiscoEnvMonApp Application icon, select **Voltage Status**.

This table provides the voltage status maintained by the environmental monitor.

### Description

The testpoint being instrumented.

### Value

The current measurement of the testpoint being instrumented.

### Lo Threshold

The lowest value that the associated instance of the object Voltage Status Value may obtain before an emergency shutdown of the managed device is initiated.

### Hi Threshold

The highest value that the associated instance of the object Voltage Status Value may obtain before an emergency shutdown of the managed device is initiated.

### @ Last Shutdown

The value of the associated instance of the object Voltage Status Value at the time an emergency shutdown of the managed device was last initiated. This value is stored in non-volatile RAM and hence is able to survive the shutdown.

**State**

The current state of the testpoint being instrumented.

## FDDI Application

This application (FddiApp) has two menu options that provide access to the following views.

- [MAC Table View on Page 71](#)
- [SMT Table View on Page 72](#)

## MAC Table View

**Access:** From the **Icon Subviews** menu for the FDDIApp Application icon, select **MAC Table**.

This view provides a table displaying FDDI MAC (Media Access Control) information. A **MAC Count** field displays the number of MACs on the FDDI ring. The table provides the following information.

**SMT Index**

The value of the SMT index associated with this MAC.

**MAC Index**

A unique value for each MAC on the device. This value must remain constant from one re-initialization of SPECTRUM to the next.

**T-Req**

The Target Token Rotation Time (TTRT) bid made by the Cisco Router.

**T-Neg**

The winning TTRT bid on the ring displayed in milliseconds.

**T-Max**

The maximum TTRT time interval.

**TvxValue**

The current value of the TVX counter (transmission time).

**T-Min**

The minimum TTRT time interval.

**Frame\_Ct**

The number of MAC frames.

**Error\_Ct**

The number of MAC errors.

**Lost\_Ct**

The number of lost MACs.

**Chip Set**

Identifies the hardware chips principally responsible for the implementation of the MAC function. This object identifier follows Internet Assigned Numbers Authority (IANA) conventions. An unknown chip set has a value of 00.

**SMT Table View**

**Access:** From the **Icon Subviews** menu for the FDDIApp Application icon, select **SMT Table**.

This view provides a table displaying FDDI SMT information. An **SMT Count** field displays the number of SMTs on the FDDI ring. The table provides the following information.

**Index**

A unique number identifying each SMT. This value must remain constant from one re-initialization of SPECTRUM to the next.

**Station ID**

The code uniquely identifying the FDDI station.

**Version ID**

The version of SMT the station is using for its operation.

**Hi Version**

The highest version of SMT that the station supports.

**Low Version**

The lowest version of SMT that the station supports.

**State**

The current attachment configuration for the station. Possible values are: Isolated, Wrap\_S, Wrap\_A, Wrap\_B, Wrap\_AB, and Thru.



## Discovery Application

This application (CiscoCDPApp) has two menu options that provide access to the following views.

- [Discovery Cache Table View on Page 73](#)
- [Interface Discovery Status Table on Page 73](#)

## Discovery Cache Table View

**Access:** From the **Icon Subviews** menu for the CiscoCDPApp Application icon, select **Cache**.

This table contains the cached information obtained by receiving Cisco Discovery Protocol (CDP) messages.

### Type

An indication of the type of address contained in the corresponding instance of `cdpCacheAddress`.

### Address

The (first) network-layer address of the device's SNMP-agent as reported in the most recent CDP message.

### Device ID

The Device-ID string as reported in the most recent CDP message. The zero-length string indicates no Device-ID field was reported in the most recent CDP message.

### Device Port

The Port-ID string as reported in the most recent CDP message. This will typically be the value of the `ifName` object (e.g., 'Ethernet0'.) The zero-length string indicates no Port-ID field was reported in the most recent CDP message.

### Platform

The device's hardware platform as reported in the most recent CDP message. The zero-length string indicates that no Platform field was reported in the most recent CDP message.

### Capabilities

The device's functional capabilities as reported in the most recent CDP message. For the latest set of specific values, see the latest version of the CDP specification. The zero-length string indicates no Capabilities field was reported in the most recent CDP message.

## Interface Discovery Status Table

**Access:** From the **Icon Subviews** menu for the CiscoCDPApp Application icon, select **Interfaces**.

This table contains the status of Cisco Discovery Protocol (CDP) on the device's interfaces.

### IF

The interface index value of the local interface.

**Discovery**

An indication of whether the Cisco Discovery Protocol is currently running on this interface.

**Group**

This object is only relevant to interfaces that are repeater ports on 802.3 repeaters; it indicates the RFC1516 group number of the repeater port that corresponds to this interface.

**Port**

This object is only relevant to interfaces that are repeater ports on 802.3 repeaters; it indicates the RFC1516 port number of the repeater port that corresponds to this interface.

**Interval**

The interval at which CDP (Cisco Discovery Protocol) messages are to be generated on this interface. The default value is 60 seconds.

## Cisco DS1APP1406 Application

This application (DSIAPP1406) has two menu options that provide access to the following views.

- [DS1 Configuration Table on Page 74](#)
- [DS1 Fractional Table on Page 79](#)

### DS1 Configuration Table

**Access:** From the **Icon Subviews** menu for the DS1APP1406 Application icon, select **DS1 Configuration Table**.

This table contains the configuration information for the DS1 Application.

**DS1 Index**

This object is the identifier of a DS1 Interface on a managed device.

**If Index**

The value for this object is equal to the value of Interface Index from the Interfaces table of MIB II (RFC1213).

**Line Type**

This variable indicates the variety of DS1 Line implementing this circuit. The type of circuit affects the number of bits per second that the circuit can reasonably carry, as well as the interpretation of the usage and error statistics.

**Table 11** provides you with a list of the line types and their values.

**Table 11: Line Types**

Type	Value
dsx1ESF	Extended SuperFrame DS1
dsx1D4	AT&T D4 format DS1
dsx1E1	CCITT Recommendation G.704 (Table 4a)
dsx1E1-CRC	CCITT Recommendation G.704 (Table 4b)
dsxE1-Mf	G.704 (Table 4a) with TS16 multiframing enabled
dsx1E1-CRC-MF	G.704 (Table 4b) with TS16 multiframing enabled

### Zero Coding

This variable describes the variety of Zero Code Suppression used on the link, which in turn affects a number of its characteristics. **Table 12** provides you with a list of the codes and their descriptions.

**Table 12: Zero Codes**

Code	Description
dsx1JBZS	Jammed Bit Zero Suppression, in which the AT&T specification of at least one pulse every 8 bit periods is literally implemented by forcing a pulse in bit 8 of each channel. Thus, only seven bits per channel, or 1.3444 Mbps, are available for data.
dsx1B8ZS	Refers to the use of a specified pattern of normal bits and bipolar violations that are used to replace a sequence of eight zero bits.
ANSI Clear Channels	May use dsx1ZBTSI, or Zero Byte Time Slot Interchange.
E1 links	With or without CRC, use dsx1HDB3 or dsx1AMI.
dsx1AMI	Refers to a mode wherein no zero code suppression is present and the line encoding does not solve the problem directly. In this application, the higher layer must provide data that meets or exceeds the pulse density requirements, such as inverting HDLC data.

**Send Code**

This variable indicates what type of code is being sent across the DS1 interface by the device.

[Table 13](#) describes the send codes and their meanings.

**Table 13: Send Codes**

Code	Description
dsx1SendNoCode	Sending looped or normal data.
dsx1SendLineCode	Sending a request for a line loopback.
dsx1SendPayloadCode	Sending a request for a payload loopback.
dsx1SendResetCode	Sending a loopback termination request.
dsx1SendQRS	Sending a Quasi-Random Signal (QRS) test pattern.
dsx1Send511Pattern	Sending a 511 bit fixed test pattern.
dsx1Send3in24Pattern	Sending a fixed test pattern of 3 bits set in 24.
dsx1SendOtherTestPattern	Sending a test pattern other than those described by this object.

**Vendor ID**

This variable contains the transmission vendor's circuit identifier, for the purpose of facilitating troubleshooting.

**Loopback Config**

This variable represents the loopback configuration of the DS1 interface. Agents supporting read/write access should return `badValue` in response to a requested loopback state that the interface does not support.

[Table 14](#) describes the loopback configurations and their meanings.

**Table 14: Loopback Configurations**

Value	Description
dsx1NoLoop	Not in the loopback state. A device that is not capable of performing a loopback on the interface shall always return this as its value.
dsx1PayloadLoop	The received signal at this interface is looped through the device. Typically the received signal is looped back for retransmission after it has passed through the device's framing function.
dsx1LineLoop	The received signal at this interface does not go through the device (minimum penetration) but is looped back out.
dsx1OtherLoop	Loopbacks that are not defined here.

### Line Status

This variable indicates the Line Status of the interface. It contains loopback, failure, received alarm and transmitted alarm information. The Line Status is a bit map represented as a sum; therefore, it can represent multiple failures

(alarms) and a Loopback State simultaneously. The various bit positions are shown in [Table 15](#).

**Table 15: Line Statuses**

Bit	Status	Description
1	dsx1NoAlarm	No Alarm Present
2	dsx1RcvFarEndLOF	Far end LOF (a.k.a., Yellow Alarm)
4	dsx1XmtFarEndLOF	Near end sending LOF Indication
8	dsx1RcvAIS	Far end sending AIS
16	dsx1XmtAIS	Near end sending AIS
32	dsx1LossOfFrame	Near end LOF (a.k.a., Red Alarm)
64	dsx1LossOfSignal	Near end Loss Of Signal
128	dsx1LoopbackState	Near end is looped

**Table 15: Line Statuses (Continued)**

Bit	Status	Description
256	dsx1T16AIS	E1 TS16 AIS
512	dsx1RcvFarEndLOMF	Far End Sending TS16 LOMF
1024	dsx1XmtFarEndLOMF	Near End Sending TS16 LOMF
2048	dsx1RcvTestCode	Near End detects a test code
4096	dsx1OtherFailure	Any line status not defined.

**Signal Mode**

The following table ([Table 16](#)) describes the signal modes that are available.

**Table 16: Signal Modes**

Mode	Description
none	Indicates that no bits are reserved for signaling on this channel.
robbedBit	Indicates that T1 Robbed Bit Signaling is in use.
bitOriented	Indicates that E1 Channel Associated Signaling is in use.
messageOriented	Indicates that Common Channel Signaling is in use either on channel 16 of an E1 link or channel 24 of a T1.

**Transmit Clock**

The following table ([Table 17](#)) describes the sources for the Transmit Clock.

**Table 17: Transmit Clock Sources**

Code	Description
loopTiming	Indicates that the recovered receive clock is used as the transmit clock.
localTiming	Indicates that a local clock source is used.
throughTiming	Indicates that recovered receive clock from another interface is used as the transmit clock.

**Facilities Data Link**

This bitmap describes the use of the facilities data link, and is the sum of the capabilities as shown in [Table 18](#).

**Table 18: Facilities Data Link Codes**

Code	Description
other	Indicates that a protocol other than the one following is used.
dsx1Ansi-T1-403	Refers to the FDL exchange recommended by ANSI.
dsx1Att-54016	Refers to ESF FDL exchanges.
dsx1Fdl-none	Indicates that the device does not use the FDL.

**DS1 Fractional Table**

**Access:** From the **Icon Subviews** menu for the **DS1APP1406 Application icon**, select **Fractional Table**.

This table contains the fractional information for the DS1APP1406 Application.

**DS1 Index**

The index value uniquely identifying the DS1 interface to which this entry is applicable.

**Channel Number**

The channel number for this entry.

## If Index

An index value that uniquely identifies an interface. If no interface is currently using a channel, the value should be zero. If a single interface occupies more than one time slot, that ifIndex value will be found in multiple time slots.

## Ethernet Application

This application (EthernetApp) provides access to the application-specific Detail view.

To access the Detail view, select **Detail** from the **Icon Subviews** menu. This view provides access to three pie charts with performance statistics. For more information about the frame or transmit error performance statistics, refer to ***How to Manage Your Network with SPECTRUM***.

## Interface Ethernet Application

This application (EthernetIfApp) provides access to the application-specific Detail view.

To access the Detail view, select **Detail** from the **Icon Subviews** menu. This view provides access to three pie charts with performance statistics. For more information about the frame or transmit error performance statistics, refer to ***How to Manage Your Network with SPECTRUM***.

## Cisco Interface Application

This application (CiscoIfceApp) provides access to the application-specific Configuration view.

To access the Configuration view, select **Configuration** from the **Icon Subviews** menu. The CiscoIfceApp Configuration window opens where you can choose to **Create Interface Applications** and/or **Create Sub Interface Applications**.

## Cisco RFC1317 Application

This application (RFC1317App) provides access to the RS232 Port Table.

## RS232 Port Table

**Access:** From the **Icon Subviews** menu for the RFC1317App Application icon, select **RS232 Port Table**.

### Port Index

The value of Interface Index for the port. By convention, and if possible, hardware port numbers map directly to external connectors. The value for each port must remain constant at least from one re-initialization of the network management agent to the next.

### Port Type

The port's hardware type.



**In Speed**

The port's input speed in bits per second.

**Out Speed**

The port's output speed in bits per second.

**In Signals**

The number of input signals for the port in the input signal table.

**Out Signals**

The number of output signals for the port in the output signal table.

## **Cisco RFC1317 Async Application**

This application (RFC1317AsyncApp) provides access to the RS232 Asynchronous Port Table.

## **RS232 Asynchronous Port Table**

**Port ID**

A unique value for each port.

**Data Bits**

The port's number of bits in a character.

**Stop Bits**

The port's number of stop bits.

**Parity**

The port's sense of a character parity bit.

**AutoBaud**

A control for the port's ability to automatically sense input speed.

**Error Breakdown - Parity**

Total number of characters with a parity error input from the port since system re-initialization and while the port state was "up" or "test."

**Error Breakdown - Framing**

Total number of characters with a framing error input from the port since system re-initialization and while the port state was "up" or "test."

**Error Breakdown - Overrun**

Total number of characters with an overrun error input from the port since system re-initialization and while the port state was "up" or "test."

## Cisco Terminal Server Application

The Cisco Terminal Server Application (CiscoTSApp) has three menu options that provide access to the following views:

- [Line Configuration View on Page 82](#)
- [Cisco Terminal Server Line View on Page 83](#)
- [Cisco Terminal Server Session View on Page 84](#)

### Line Configuration View

**Access:** From the **Icon Subviews** menu for the CiscoTSApp Application icon, select **Line Configuration**.

This view displays the following information on the terminal server lines.

#### Lines

Number of lines.

#### Message tty Line

The tty line to send the message to.

#### Message Interval time

The interval in milliseconds between reissuing message.

#### Message Duration

The length of time in milliseconds to reissue message.

#### Message Text

The actual message, up to 256 characters.

#### Message Temporary Banner

Select to use the message as a temporary banner in addition to the normal banner.

#### Message send

The value used to determine what is done after the message is sent.

#### Clear tty Line

The last line cleared.

## Cisco Terminal Server Line View

**Access:** From the **Icon Subviews** menu for the CiscoTSAApp Application icon, select **Line Table**.

This view displays the following information on each terminal server line connected to the Cisco MC3810.

### Status

The current state of this line. Possible states are: “Active” and “Inactive.”

### Type

The type of line. Possible types are: Unknown, Console, Terminal, Line-Printer, Virtual-Terminal, and Auxiliary.

### Autobaud

Indicates whether or not the line will autobaud.

### Speed In

The input speed of this line, displayed as a baud rate.

### Speed Out

The output speed of this line, displayed as a baud rate.

### Flow Control

The type of flow control in use on this line.

Possible flow control types are: Unknown, None, Software-Input, Software-Output,

Software-Both, Hardware-Input, Hardware-Output, and Hardware-Both.

### Modem Control

The type of modem control in use on this line.

Possible modem control types are: Unknown, None, Call-In, Call-Out, CTS-Required, RI-IS-CD, and InOut.

### Location

The physical location of this line.

### Term Type

The type of terminal on this line.

### Length in Lines

Length, in lines, of the terminal screen attached to this line.

### Width in Char

Width, in characters, of the terminal screen attached to this line.

### Escape Char

Escape character used to breakout the active sessions.

### Idle Time out

The amount of idle time allowed on this line before the line times out.

**Session Time out**

The amount of idle time allowed in this session before the session times out.

**Rotary**

The rotary group number the line belongs to.

**# of Connections**

The number of times a connection has been made to or from this line.

**Current Session**

The current number of sessions in use on this line.

**User**

Terminal Access Controller Access Control System (TACACS ) user name, if TACACS is enabled.

**Noise**

Count of garbage characters received when the line is inactive.

**Line Number**

The number (listed in sequential order) for this terminal server line.

**Time Active**

The time, in seconds, since the line was activated.

**Cisco Terminal Server Session View**

**Access:** From the **Icon Subviews** menu for the *CiscoTSAApp* Application icon, select **Session Table**.

This view displays the Terminal Server (TS) Session Table, which provides information about each terminal server session connected to the Cisco MC3810.

**Type**

Identifies session type as Pad, Stream, Rlogin, Telnet, TCP and Unknown.

**Direction**

The direction of this session. Possible directions are: Unknown, Incoming, and Outgoing.

**Addr**

The remote host address of the session.

**Name**

The remote host name of the session.

**State**

Indicates whether this session is the currently "Active" or "Inactive."

**Idle**

Time in seconds that the session has been idle.

**Line**

The index value that identifies this line.

**Session**

A second index value that identifies this session.

# Performance Views

This section provides brief descriptions of the Performance views available for models of Cisco MC3810 devices in SPECTRUM.

Performance views for the Cisco MC3810 provide statistical information about the operation of the device and packet information for the device and its ports. The following performance views are described in this section:

- [Device Performance View on Page 86](#)
- [Performance View on Page 87](#)
- [Port Performance View on Page 87](#)

For more information on Performance views, refer to the **SPECTRUM Views** documentation.

## Device Performance View

**Access:** From the **Icon Subviews** menu for the *Cisco\_MC3810* Device icon, select **Device Performance**.

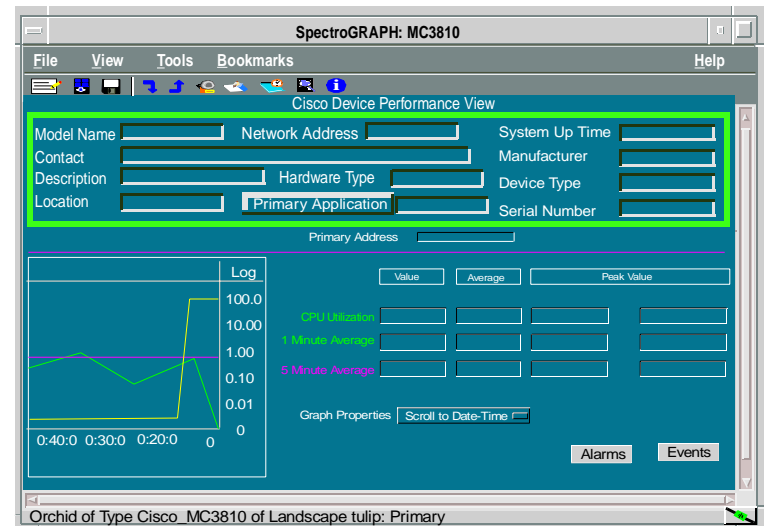
This view (**Figure 7**) includes both a graph and a table that show current, average, and peak values for the following performance statistics:

- CPU Utilization

- 1 Minute Average
- 5 Minute Average

The view also provides button access to the Enterprise Alarm Manager and the Event Log.

**Figure 7: Device Performance View**



## Performance View

**Access:** From the **Icon Subviews** menu for the *Cisco\_MC3810 Interface* icon, select **Performance**.

This view provides performance information about the packets being passed through the device. The following packet statistics for the entire device are displayed in this view:

- % Delivered
- % Forwarded
- % Transmitted
- % Error
- % Discarded

## Port Performance View

**Access:** From the **Icon Subviews** menu for a selected Port Label in either the Device view or the Device Topology view, select **Performance**.

This view provides performance information about the packets being passed through a particular interface. The following packet statistics for the selected interface are displayed in this view:

- Load
- Packet Rate
- % Error
- % Discarded

**Table 19** lists the Port Performance view buttons and the views they open.

**Table 19: Performance View Buttons**

Button	Opens the...
Transmit	Detailed Port Performance view for packets transmitted.
Receive	Detailed Port Performance view for packets received.
Detail	Interface Detail view, which displays packet, error, and discarded breakdown statistics.
Config	<a href="#">Interface Configuration - Information View on Page 18.</a>
Threshold	Interface Threshold view, which allows you to set the thresholds for load, packet rate, error rate, and % discarded.
Alarms	Enterprise Alarm Manager.
Events	Event Log.

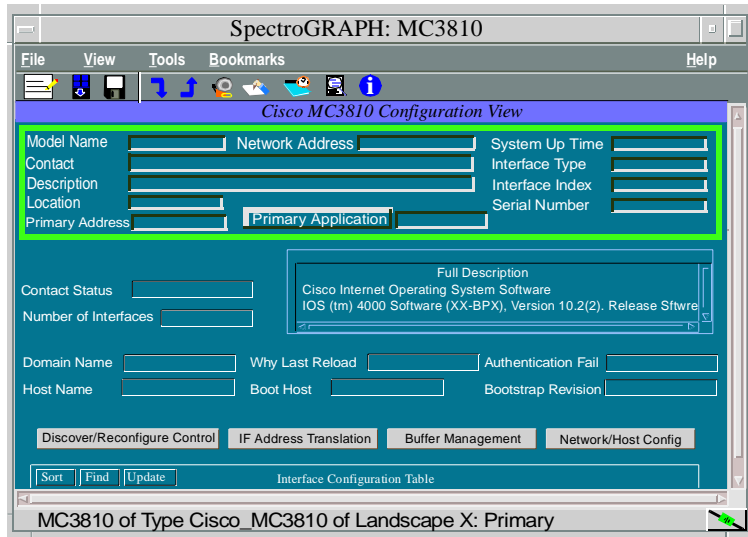


# Configuration View

This section describes the Configuration view and subviews accessible from the Cisco MC3810 Device icon.

Configuration views allow you to view and modify current settings for the modeled device and its interfaces, ports, and applications.

**Figure 8: Device Configuration View**



## Device Configuration View

**Access:** From the **Icon Subviews** menu for the Cisco\_MC3810 Device icon, select **Device Configuration**.

The Device Configuration view for the Cisco MC3810 (Figure 8) provides status and configuration information about the device as a whole as well as on a port-by-port basis. It also provides access to Redundancy and Model Reconfiguration Options, the Interface Address Translation Table, the Cisco Buffer Management View, and the Network/Host Configuration view.

### Primary Address

The IP Address for the modeled device.

### Contact Status

The status of the Cisco MC3810. Possible values are: Established, Lost, or Initial.

### Number of Interfaces

The number of ports on the Cisco MC3810.

**Domain Name**

An ASCII text string displaying the domain portion of the domain name of the host.

**Host Name**

An ASCII text string displaying the name of the host.

**Why Last Reload**

An ASCII text string explaining why the system was last restarted.

**Boot Host**

The IP address of the host that provided the currently running software.

**Authentication Fail**

The IP address of the last SNMP authorization failure.

**Discover/Reconfigure Control**

This button opens the [Redundancy and Model Reconfiguration Options View on Page 91](#).

**IF Address Translation**

The button opens the [Interface Address Translation Table View on Page 92](#).

**Buffer Management**

This button opens the [Cisco Buffer Management View on Page 93](#), which provides data information for network traffic to the Cisco MC3810. It counts IP Packets received and tracks activity for the various buffers.

**Network/Host Config**

This button opens the [Network/Host Configuration View on Page 96](#).

## Interface Configuration Table

This section of the Cisco MC3810 Configuration view provides the following port configuration information for each of the Cisco MC3810's ports.

**Index**

The port number on the Cisco MC3810.

**Description**

A textual description of the interface, which may include the name of the manufacturer, the

product name, and version number of the hardware interface.

**Type**

The type of interface for the port.

**Bandwidth**

The estimated bandwidth of the interface measured in bits per second. For interfaces that do not vary in bandwidth or for which no accurate estimate can be made, a nominal bandwidth is provided.

**Physical Address**

The Ethernet (MAC) address of the port.

**Operation Status**

The current operational state of the port (On, Off, or Testing).

**Admin Status**

The desired operational state of the port (On, Off, or Testing).

**Last Change**

The System UpTime value when the port entered its current operational state.

**Change Reason**

An ASCII text string explaining why the system was last restarted.

**Queue Length**

The length of the outbound packet queue in packets.

**Packet Size**

The largest Maximum Transmission Unit (MTU) that can be transmitted or received by the port measured in octets.

## Redundancy and Model Reconfiguration Options View

**Access:** In the *Device Configuration View*, click the *Discover/Reconfigure Control* button.

This view allows you to enable redundant addresses, have SPECTRUM notify you of a redundancy update, and reconfigure aspects of your network connections.

**Preferred Addresses**

This button opens the Preferred Addresses dialog box which allows you to select the redundant preferred address for the device.

**Redundancy Administrative Status**

Set this button to “Enabled” to cause SPECTRUM to update this model with an address from the Redundant Preferred Address list when the primary address is not accessible.

### Generate Redundancy Alarms

Set this button to “True” to cause SPECTRUM to generate an alarm when a redundant address is selected.

### Automatically Reconfigure Interfaces

Set this button to “True” to cause SPECTRUM to monitor the number of interfaces for this device. If a change is detected by SPECTRUM, the interfaces displayed in SPECTRUM are updated to reflect the change.

### Create Sub-Interfaces

Set this button to determine if SPECTRUM should model the devices sub-interfaces. If set to “True,” these models will be displayed in the Sub-Interface view of the Physical Interface model.

### Reconfigure due to LINK UP/Down events

Set this button to “True” to cause SPECTRUM to verify the interfaces displayed when a LINK UP or LINK DOWN event is received.

### Topologically Relocate Model

Set this button to “True” to allow SPECTRUM to relocate the model to a different topological location as part of the AutoDiscovery process.

### Device Discovery after Reconfiguration

Set this button to “True” to cause SPECTRUM to verify the interfaces displayed after a model reconfiguration occurs.

#### Reconfigure Model

This button does a complete re-read of the device and its ports. The SpectroSERVER information for this device will be updated if any of the port addresses have been changed or removed, or if the port type has been changed.

#### Discover LANs

This button discovers the devices that are connected to the ports for this device. Clicking on this button will create all LANS which are defined for each port.

## Interface Address Translation Table View

**Access:** In the Configuration view, click the **IF Address Translation** button.

This view cross-references device IP addresses to device MAC addresses for selected nodes between networks. Double-clicking on any column entry opens an address-specific Address Translation

Table Information view allowing you to modify each of the three fields for that entry.

## Cisco Buffer Management View

**Access:** In the Configuration view, click the **Buffer Management** button.

This view provides the following information:

### Free Memory

The amount of available memory in bytes.

### Buffer Failures

The number of packets discarded due to no memory. An attempted packet buffer allocation failed.

### Buffer No Memory

The number of buffer creation failures due to no memory.

### Max Buffer Elements

The maximum number of buffer elements the Cisco MC3810 may create.

### Buffer Elements

This area of the Cisco Buffer Management view displays statistics on buffer “elements” (data structures used to enqueue buffers in multiple output queues). Each attribute is summarized for

the total interval since first poll and the rate interval between polls (Delta).

### Buffer Elements Free

The number of buffer elements available.

### Buffer Element Hits

The number of successful requests for buffer elements.

### Buffer Element Misses

The number of unsuccessful requests for buffer elements.

### Buffer Element Creates

The number of new buffer elements created by the Cisco MC3810.

## Buffer Management Buttons

These five buttons located in the Cisco Buffer Management view allow you to access additional buffer management information according to buffer size. Each attribute is summarized for the total interval since first poll and the rate interval between polls (Delta).

### Small Buffers

This button opens the Small Buffer Management view. [Table 20](#) provides descriptions for the fields presented in the Small Buffer Management view.

**Table 20: Small Buffers View Fields**

Field	Description
Small Buffer Size	The maximum size of a small buffer.
Max Small Buffers	The maximum number of small buffers the Cisco MC3810 can create.
Small Buffer Total	The total number of enqueued small buffers.
Small Buffer Free	The number of small buffers available.
Small Buffer Hits	The number of successful requests for small buffers.
Small Buffer Misses	The number of unsuccessful requests for small buffers.
Small Buffer Creates	The number of new small buffers created by the Cisco MC3810.
Small Buffer Trims	The number of small buffers returned to the free buffer pool.

**Medium Buffers**

This button opens the Cisco Medium Buffer Management view. [Table 21](#) provides descriptions for the fields in the Medium Buffer Management view.

**Table 21: Medium Buffers View Fields**

Field	Description
Medium Buffer Size	The maximum size of a medium buffer.
Max Medium Buffers	The maximum number of medium buffers the Cisco MC3810 can create.
Medium Buffer Total	The total number of enqueued medium buffers.
Medium Buffer Free	The number of medium buffers available.
Medium Buffer Hits	The number of successful requests for medium buffers.
Medium Buffer Misses	The number of unsuccessful requests for medium buffers.
Medium Buffer Creates	The number of new medium buffers created by the Cisco MC3810.
Medium Buffer Trims	The number of medium buffers returned to the free buffer pool.

**Big Buffers**

The button opens the Big Buffers view. [Table 22](#) provides descriptions for the fields presented in the Big Buffer Management view.

**Table 22: Big Buffers View Fields**

Field	Description
Big Buffer Size	The maximum size of a big buffer.
Max Big Buffers	The maximum number of big buffers the Cisco MC3810 can create.
Big Buffer Total	The total number of enqueued big buffers.
Big Buffer Free	The number of big buffers available.
Big Buffer Hits	The number of successful requests for big buffers.
Big Buffer Misses	The number of unsuccessful requests for big buffers.
Big Buffer Creates	The number of new big buffers created by the Cisco MC3810.
Big Buffer Trims	The number of big buffers returned to the free buffer pool.

**Large Buffers**

This button opens the Cisco Large Buffer Management view. [Table 23](#) provides descriptions for the fields presented in the Large Buffer Management view.

**Table 23: Large Buffers View Fields**

Field	Description
Large Buffer Size	The maximum number of bytes in a large buffer.
Max Large Buffers	The maximum number of large buffers the Cisco MC3810 can create.
Large Buffer Total	The total number of enqueued large buffers.
Large Buffer Free	The number of large buffers available.
Large Buffer Hits	The number of successful requests for large buffers.
Large Buffer Misses	The number of unsuccessful requests for large buffers.
Large Buffer Creates	The number of new large buffers created by the Cisco MC3810.
Large Buffer Trims	The number of large buffers returned to the free buffer pool.

Huge Buffers

This button opens the Cisco Huge Buffer Management view. Table 24 provides descriptions for the fields presented in the Huge Buffer Management view.

Table 24: Huge Buffers View Fields

Field	Description
Huge Buffer Size	The maximum number of bytes in a huge buffer.
Max Huge Buffers	The maximum number of huge buffers the Cisco MC3810 can create.
Huge Buffer Total	The total number of enqueued huge buffers.
Huge Buffer Free	The number of huge buffers available.
Huge Buffer Hits	The number of successful requests for huge buffers.
Huge Buffer Misses	The number of unsuccessful requests for huge buffers.
Huge Buffer Creates	The number of new huge buffers created by the Cisco MC3810.
Huge Buffer Trims	The number of huge buffers returned to the free buffer pool.

Network/Host Configuration View

**Access:** In the Configuration view, click the Network/Host Config button.

This view displays the following information.

Network Configuration

The network configuration file contains commands that apply to all network servers and terminal services on a network.

Previous Host Addr

Provides the address of the host that supplied the network configuration file for the managed device.

Previous File Name

Provides the name of the network configuration file that resides on the managed device.

New Host Addr

This field replaces the **Previous Host Addr** field when the Upload Net Config file is selected.

New File Name

This field replaces the **Previous File Name** field when the Upload Net Config file is selected.

Upload Net Config File

Initiates the transfer of configuration file from host to server.



**TFTP Server Addr**

Address used to send the configuration file from server to a host.

**File Name**

The file name where you are storing the configuration.

**Copy Config to Net**

Initiates the transfer of configuration file from server to host.

**Host Configuration**

The host configuration file contains commands that apply to one network server in particular.

**Previous Host Addr**

The address of the host that provided the host configuration file for the managed device.

**Previous File Name**

The name of the last host configuration file used by the device.

**New Host Addr**

This field replaces the **Previous Host Addr** field when the Upload Host Config file is selected.

**New File Name**

This field replaces the **Previous File Name** field when the Upload Host Config file is selected.

**Upload Host Config File**

Initiates the transfer of configuration file from host to server.

**Copy Config to NVRAM**

Clicking this button writes the current (running) server configuration into Non-Volatile Random Access Memory (NVRAM) where it can be stored and retained even if the server is reloaded.

**Clear NVRAM**

Clicking this button erases whatever was in Non-Volatile Random Access Memory (NVRAM) on the server.

# Model Information View

This section provides a brief description of the Model Information views available for models of Cisco MC3810 devices in SPECTRUM.

**Access:** From the **Icon Subviews** menu for the *Cisco\_MC3810* Device icon, select **Model Information**.

Model Information views provide descriptive and configuration information about SPECTRUM models of individual devices, interfaces, and applications. [Figure 9](#) shows an example of the Model Information view for a Cisco MC3810 interface. Model Information views are also available for each of the Interface icons in the Interface Device and Interface Device Topology views, and for each of the Application icons in the Application view. Although these views may vary slightly depending on the particular entity being modeled, their basic layout and content are similar for most SPECTRUM management modules. Therefore these views are described in more detail in the **SPECTRUM Views** documentation.

**Figure 9: Model Information View**

The screenshot shows the 'SpectroGRAPH: MC3810' window with the 'Cisco MC3810 Model Information View' tab selected. The form contains the following fields:

Cisco MC3810 Model Information View		
Model Name	Network Address	System Up Time
Contact		Manufacturer
Description		Device Type
Location	Hardware Type	Serial Number
Primary Address	Primary Application	

General Information		Communication Information	
MM Name		DCM TimeOut	
MM Part Number		DCM Retry	
MM Version Number		Community Name	
Model Type		Mgmt Protocol	
Model Creation Time			
Model Created By			
Model State			
Security String			

Poll/Log Information	
Poll Interval	
Polling Status	

orchid of type Cisco\_MC3810 of Landscape tulip: Primary

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